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MAY 13, 1922.

VOL. XCVI.



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B 11 D 1	etail Price per tin. Small Orders net cost.	SPECIAL TERMS FOR LARGER ORDERS.				
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2 ₂ / ₀ Discount	£4 13 8 Costs	7 1 4 1	3 8
	Profit (66 %)	£3	2 4
OFFER NUMBER 3.	Sclls for 1		
6 doz. "SWANDOWN" at 8/- doz.	$ \stackrel{f}{2} \stackrel{\text{s. d.}}{8} \stackrel{\text{d.}}{0} $	[€] 3 1	s. d. 2 0
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May 13, 1922.

No. 552.

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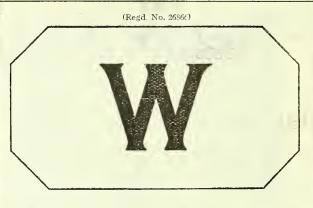
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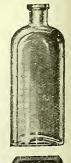
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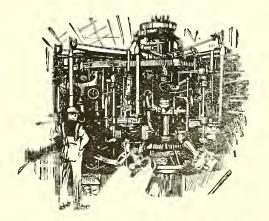
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VHAT ARE YOU OPEN FOR?

Just 'phone or write us what lines you can do with from stock. We can offer all the usual trade requisites in **Glassware**, and have a special stock of **Earthenware Pomades** with Celluloid Caps ready for delivery in ½, 1, 2 and 4 oz. sizes.



KALIS LIMES **MEDICALS** EAU DE COLOGNES OPAL. **POMADES**



EARTHENWARE POMADE

SMELLING SALTS SYRINGES DROPPING BOTTLES SURGICAL **GLASSES**



CHEMICAL & LABORATORY GLASSWARE, TEST TUBES, VIALS, BURETTES, SAMPLE TUBES, &c. &c.



FEEDING BOTTLE



TWO-ENDED FEEDER

Wholesale Only. No Retail Firms Supplied.



SON,

CHARLTON WORKS,

CHARLTON PLACE, ISLINGTON, N.1

(Opposite Agricultural Hall).

Telephones: North 2770-2 (3 lines).
Telegrams: "Assorted, Phone, London."

Codes: A B C, 5th Edition. Scott's 10th Edition (1906).
Bentley's Complete Phrase Code.

PLEASE MENTION THIS PAPER WHEN ENQUIRING.

Cures COLDS Prevents "FLU" The Pleasant "One Drop" Wonder-Cure The State State State State



of a new size of "Vapex" Inhalant that it is more economical to buy.

This 31-size contains nearly twice as much twice as the original 21-size.

Retail (P.A.T.A.) 3/Trade per doz. 27/6
(stamped).

THE high duty
on the 2/- bottles
of "Vapex" has led us to
introduce a new 3/- size,
which since it only requires
the same denomination of
medicine stampis much better
value than the popular (and
still obtainable) original.

THOMAS KERFOOT & COLUMBARDSLEY VALE, LANCASHIRE, & Bardsley House, London, N.1

COPYRIGHT



A Quick Selling Line!!

Lavender MOTH TABLETS.

> Saves Clothes, especially Woollens and Furs from destruction by Moths.

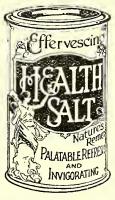
Sample tin free on application. Price: 3 dozen@5/6 per doz., 12 doz., @ 5/3 per doz.

H. & T. KIRBY & Co., Ltd., Newman House, WILLESDEN GREEN. LONDON. N.W. 2.

REDUCTION IN PRICE BISHOP'S NATURAL FRUIT SALINE is now reduced to 19/- per dozen, subject; the Retail Price remaining at 2/3 per bottle, P.A.T.A. A Bonus is offered on orders for 6 dozen, or 12 dozen on consideration of Chemists giving a Window Display. Attractive Showcards and Price-cards will be forwarded with each order. BISHOP'S NATURAL FRUIT SALINE is a business bringer. It sells well all the year round. To the Chemist.—11½d. per bottle profit if you purchase one gross lots. 11d. per bottle profit if you purchase 6 dozen lots. Bonus quantities forwarded carriage paid. It pays to push BISHOP'S. PREPARED ONLY BY ALFRED BISHOP, Ltd., 48 Spelman Street, LONDON, E.1.

You can meet any competitionwith our new





HEALTH SALTS

A fine white mobile Powder, dissolving with sustained effervescence.

Packed in Handsome Decorated Tins, rendered air-tight by our special process.

Contents guaranteed 4 oz. net weight.

Price 57/- per gross, carriage paid.

LORIMER-MARSHALL LTD.
12, TOWER HILL, LONDON, E.C.3

DINNEFORD'S MAGNESIA

has been placed upon the P.A.T.A. Protected List at the following prices:

Minimum Retail

1/3

2/6

Minimum Wholesale

10/6 per dez. net.

21/

(Minimum Quantity, £6 assorted.) Carriage Paid.

DINNEFORD'S MAGNESIA

The MINIMUM of Selling Force is necessary.

It sells itself. Being so well advertised to the general public the sales are progressive and repeats regular, so that the

PROFIT ON SALES

compares well with that of any other medicinal proprietary.

DINNEFORD & Co. Ltd., ^{12 Clipstone Street}, London, W. 1.

Telephone: MUSEUM 1776.

N.V. CHEMISCHE FABRIEK "NAARDEN"

BUSSUM, HOLLAND.

Distillers of Essential Oils, and Manufacturers of Synthetic Chemicals, Pharmaceutical Products, etc.

ALDEHYDES AMYL SALICYLATE GERANIOL AUBEPINE BENZYL ACETATE BENZALDEHYDE

BROMSTYROL CITRAL COUMARIN

DIPHENYL OXIDE HELIOTROPINE IONONE

METHYL ANTHRANILATE METHYL HEPTINE CARBONATE MUSKS

MUSTARD OIL

NEROLINE

PHENYL ACETIC ALDEHYDE PHENYL ETHYL ALCOHOL

RHODINOL SAFROL TERPINEOL VANILLIN &c. &c.

ALMOND, CORIANDER, DILL, FENNEL, LEMON, MANDARIN, PEPPERMINT, LAVENDER, SAVIN, etc., in Stock.

GERALD BROMAGE & CO., Ltd., 9/10 Foster Lane, E.C. 2

Telephone: CITY 4719.

Telegrams: "GERBROMCO, CENT, LONDON."

IORDAN ALMONDS. WALNUT HALVES. MUSCATELS. BARCELONA KERNELS.

> GLUCOSE. HEN YOLKS. ALBUMEN. LEMONS. LEMON JUICE (English Pressed).

COCOA BUTTER. CONDENSED MILK. ETC. GELATINE.

JOHN F. CROOKALL, PRODUCE MERCHANT,

15 STANLEY STREET LIVERPOOL.

DODGE & OLCOTT CO.,

20 MARK LANE, LONDON, E.C. 3.



THE "D & 0" BRAND is the "Standard of Quality" for

OILS of BAY, CEDARWOOD, PATCHOULI, PEPPERMINT, SASSAFRAS, ETC.

BALSAMS of Copaiba, Peru, Tolv.

TONKA BEANS, Angosturas.

Telegrams—
"EGDARF, FEN, LONDON."

Phone— CITY 2468.

WORKS
ROERMOND, HOLLAND.

Manufacturers of

Base Perfumery Products and Flower Oils.

- RACO -

MUSK AMBRETTE c.p. 100°/.

MUSK KETONE c.p. 100°/.

MUSK XYLOL c.p. 100°/.

OLEUM-MUSK art.

generally regarded as the STANDARD.

Sole Representative for the U.K.:

ALFRED PAUL WHITE, 5 Water Lane,

Gt. Tower Street, LONDON, E.C. 3.

advertising campaign FOR NILDÉ **PRODUCTS**

HE new Summer Advertising Campaign for Poudre Nildé will emphasise "The Practicability of the Sifter Box." The illustrations will be "outdoor" ones, and will lay stress on the fact that the practical sifter box makes it easy to protect and beautify the complexion with Poudre Nildé—at any time and anywhere.

While the main interest of this new campaign centres on POUDRE NILDE, the advertisements will also feature the other Nilde toilet preparations-ROUGE INVISIBLE NILDE,

CRÈME DE BEAUTÉ NILDÉ, SAVON NILDÉ, and NILDÉ LIP SALVES.

The advertisements will appear frequently and regularly in the "Daily Mail," "Daily Mirror," "London Mail" and "Weldon's," covering a circulation of several millions throughout Great Britain.

Display Nilde preparations in your windows and on your counter-and get your share of the increased demand for Nildé goods.

Crème de Beauté Nildé

Blanche or Naturelle,

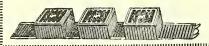




Savon Nildé

The Creamy Lather Soap, Price 1/-

Cartons containing 3 Tablets 3/-



Nildé Lip Salves

In elegant metal containers.

White -

Rouge or

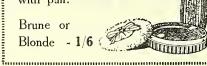
Carmine 1/-



Rouge Invisible Nildé

In the sifter box with puff.

Brune or Blonde - 1/6



in the sifter box

Made in six shades-Rachel, Naturelle, Blanche, Rose, Basanée and Indienne.

Handbag size, 1/-; medium, 2/-; large, 3/6.

Leather or fancy embroidered Vanity Cases with mirror in lid. Small size, 5/-; medium, 7/6; large, 10/-.



All Nilde preparations show $33\frac{1}{3}\%$ profit on selling price.

British and Colonial Agents:

8 BLENHEIM STREET, LONDON, W.1.



The series will appear frequently and regularly during the months of May, June, July, August and September.



The

HENNA CULT

of Hair Beauty, based on the famous

EVAN-WILLIAMS ORIGINAL

HENNA SHAMPOO

daily extends its boundaries, and is now a subject for popular journalism.

It pays to sell this famous line.

You will find full details of terms and prices in the current issue of "THE SHAMPOO SALESMAN," a copy of which is gladly sent on request.

Be sure to order



Wholesale only:

THE EVAN-WILLIAMS CO., LTD. 18 Ogle Street - LONDON, W. 1.

····

DEARBORN

37 Gray's Inn Road, LONDON, W.C.

Toilet Specialities.

	Price	Selling
	per doz. to Retailer.	Price P.A.T.A.
PILENTA SOAP	10/-	1/-
A complexion soap.	- 1	= '
PROLACTUM	10/-	= 1/-
For the lips.		
PARSIDIUM JELLY -	10/-	1,'-
For wrinkles.		
ALLACITE of ORANGE -	22/6	2 6
A dressing cream. BLOSSOM		
BORANIUM	22 6	26
A hair tonic.		
SILMERINE	22,6	2,6
Hair-curling fluid.	00/0	0/0
CLEMINITE For a face lotion.	22/6	2 6
COLLIANDUM	00/0	0.0
For a face tint.	22 6	2/6
PERGOL	00.6	26
A deodorant.	22/6	2 6
STALLAX	22 6	2/6
For a shampoo.	22 0	20
JETTALINE	31 6	3 6
For clearing the skin.	3110	3 0
PHEMINOL	36 -	4-
A depilatory.	00	-
TEKKO PASTE	226	26
Camphor cream.		
MENNALINE	36 -	4-
For the eyelaslies.		
MERCOLISED WAX -	31/6	3 6
A face cream.		
STYMOL	36 -	4/-
For oily complexions and blackheads.		
BARSYDE	22 6	26
Dandruff eradicator.		
TAMMALITE	22/6	26
For grey or faded hair.		
LIQUID PERGOL	31/6	3/6
To check excessive perspiration locally		00
BICROLIUM	22 6	2 6
For whitening the hands.	04/0	0/0
COCONOIDS	31/6	3/6
For figure development. HARAPOSA	00 6	0.6
Nut oil shampoo.	22,6	2,6
ivit on snampoo.		

STOCKED BY ALL WHOLESALE HOUSES

COLONIAL DEPOTS AND AGENCIES:

AUSTRALIA:
ALL WHOLESALERS, and
DEARBORN, Ltd., Grace House, Clarenc: Street, Sydney.

SOUTH AFRICA: LENNON, Ltd. SIVE BROS. & KARNOVSKY, Ltd. (Johannesburg).

INDIA:

KEMP & CO., Ltd. (Bombay).

THE INTERNATIONAL TRADING CO., Princess Street (Bombay).

R. MACLURE (Madras).

SMITH. STANISTREET & CO. (Calcutta).

MEHTA BROS. (Calcutta).

JAMNADAS BROS. (Bombay).

NEW ZEALAND: SHARLAND & CO., Ltd. (Auckland & Wellington). SOUTH AMERICA:
DEARBORN, Ltd. Calla Salta 264, Buenos Aires.

HOVENDEN'S EAU DE COLOGNE, etc.



Four Star | Silver | Three Star

EXTRA FINE QUALITY

Abcu: Doz. 4706 2 oz. 52/-4707 4 oz. 98/~

Fancy 9-oz. stoppered bottles, 19/- each.

No. 4707

Star

In Wicker Bottles pints (reputed) 8/6



Doz. 1569R 1 oz. 17/9 1496 2 oz. 31/-1497 4 oz. 57/-

> Fancy 9-oz. stoppered bottles, 14/- each.





The Imperial Bath Crystals

ASSORTED PERFUMES

Violet, Lavender, Cologne, Rose, Verbena, and Sweet Pea.

No.	About	Doz.
4564	6 oz.	10/-
4565	8 oz.	12/-
4566	16 oz.	20/-
4566a	32 oz.	33/-
4568	40 oz.	54/-

4-lb. tins, 4/6 each. 7-lb. tins, 7/6 each.

No. 4566

Toilet Soaps

TRIPLE MILLED

No. 4180 Series.

Windsor, Bu termilk, Boracic, Oatmeal, etc.

No. 4180 3/6 Doz.

" 4180a 3/2 "

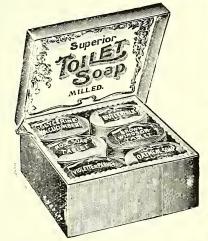
4180_B 2/6 "

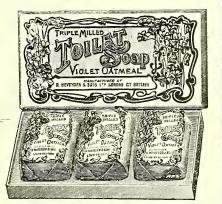
No. 4290 Series.

LARGE **TABLETS**

3 in box. 15/- doz. boxes.

Violet Oatmeal, Rose, Carnation.





29, 30, 31, 32 & 33 BERNERS STREET, OXFORD STREET, W. 1. And 89, 91, 93 & 95 CITY ROAD, FINSBURY, E.C. 1.

Telephone: 6260 London Wall (2 lines).

Factory: 41 to 53 BRITANNIA ROW, ISLINGTON, N.



WINDOW DISPLAY

RETAIL PRICE
1/6
EACH NET
(P.A.T.A.)

Attractive Window Display material and Showcards supplied. Sample Tubes supplied gratis in proportion to quantity ordered.

PRICE
13/6
PER DOZEN.

In order to introduce "Peldo" we are oftering a special bonus for a guaranteed window display of not less than 14 days as follows:

On orders of 1 gross a bonus of 18 fullsize tubes.

On orders of 6 dozen a bonus of 8 fullsize tubes.

On orders of 3 dozen a bonus of 3 fullsize tubes.



We received the following letter on the 22nd of April:

Gentlemen,-

Please send per return 3 dozen 1/6 "Peldo," with full range of window display material as per your offer in today's Chemist and Druggist. What "Peldo" I have sold up to now has given entire satisfaction, and sales are increased purely through users' recommendation. I hope when better known to do big business with this profitable line.

Yours faithfully,

Further particulars on application to

C. R. HARKER, STAGG & MORGAN, LTD.

Devon Wharf and Bell Wharf, Emmott Street, MILE END, E.1.

Seasonable Specialities

The following products are specially worthy of attention and display at the present time. Their intrinsic merit ensures repeat orders.

Antacid Lozenges

The formula includes Taka-Diastase, antacids and carminatives. Many customers will be glad to know of this aid to digestion.

M.R.P. 1/3

M.W.P. 10/2 net per dozen

Euthymol Tooth Paste

An effective germicidal cleansing dentifrice that makes an effective display, and brings the right class of customer into the pharmacy.

M.R.P. 1/3

M.W.P. 10/2 net per dozen

Fecto

Flies and other insects are a regular summer plague. Fecto is a non-poisonous disinfectant preventive and remedy.

M.R.P.

M.W.P.

8-oz. 1/3

10/2 net per dozen

16-oz. 2/3

Germicidal Soap

A genuine antiseptic soap, available, among other uses, as a shampoo for scurf or dandruff, and for the destruction of pediculi of all kinds.

M.R.P. 1/3

M.W.P. 10/2 net per dozen

Hydrogen Peroxide Solution

Valuable as a mouth-wash, as an application for abrasions, insect bites, freckles, etc. as well as for toilet purposes.

M.R.P.

M.W.P.

4-oz. 1/6

12/2 net per dozen

8-oz. 2/6

20/6 ,,

16-oz. 4/6

39/3 ,,

Other preparations that should not be forgotten are Analgesic Balm, Bath Crystals, Bay Rum, Euthymol Cold Cream, Hydrated Magnesia, Rennin Tablets, Salevac, Sulphur Lozenges, Tarfoam and Tonolene.

Send a postcard for details of best terms.



PARKE, DAVIS & CO. 50-54, Beak Street, LONDON, W.1

Laboratories -Hounslow, Middlesex

There are SPONGES sponges

MARCUSON BROS. do not stock the latter, but if you are looking for the pick of the market, whether Turkey or Honeycomb, get into touch with us. It is impossible to obtain better value than we can give you and before placing your next order we suggest you drop us a line.

MARCUSON IMPORTERS, EXPORTERS, MERCHANTS, MINORIES, LONDON, E.I.

Telephone: Avenue 840.

No connection with any other firm,

Telegrams : "Pantalaria, Ald, London."

 $72\frac{1}{2}\%$ ON COST

42½% PROFIT

P.A.T.A.

FOR A SHAVING SOAP WITH FEATURES THAT SELL IT ON SIGHT

MADE TO PROLONG THE LIFE OF THE SHAVING BRUSH.

Sterilizes the Face while Shaving.

OF ALL WHOLESALE HOUSES.



JAKSON'S PEPPERMINT, LAVENDER & CAMOMILE OILS

are the BEST.

Produced and Prepared by

THE LARGEST GROWERS & DISTILLERS IN ENGLAND.

Distillery:

J. JAKSON & CO. (Mitcham Rd., 1921), LTD. Mitcham Road, WEST CROYDON.

AGENTS for the U.K.:

F. NEWBERY & SONS, LTD. 27 & 28 Charterhouse Square, London, E.C. 1

Perfume your **Preparations** With



PREEM

CONCENTRATED ESSENCES AND COMPOUNDS

More Satisfaction, Better Sales, Bigger Profits, and more Repeat Orders.

REEMO ESSENCES impart to all Toilet Preparations in which they are used a delightful charm and fragrance quite of their own. Your customers will be delighted with them and will return again and again for "another bottle like the last." They are highly concentrated, and, therefore, very economical, and being ready for immediate use they require no filtering, mixing or blending beforehand. Used by the leading chemists throughout the world.

PREEMO CONCENTRÉ & ESSENTIAL OIL Co. 63 High Holborn, W.C.1. Telephone: Chancery 8095.

AND AT PARIS AND NEW YORK.



Why hot you?

Each week we are fixing up new agencies,

Already the list is topped by such names as Messrs. Harrods, Marcel's, Hill, Stewart, and Maitland. They realise that the demand for Héra products must grow, as a natural result of good advertising and the merits of the products themselves.

He who takes up an agency now, when demand is but growing, will surely reap the benefit when demand is great and constant.

We offer a limited number of Hera Agencies—agencies which add profit and prestige to the most high-class business. Why not decide now to take one up?

The products are good—the terms are good—demand is growing rapidly; it is a worth-while proposition.

WRITE US NOW FOR ALL INFORMATION.

WALTER E. STOKES & CO. 8 Woodstock St., Oxford St., LONDON, W.1.

Stokes, London, Mayfair 4481 Phone—Mayfair 4481 Grams-



Commercial Publicity.



Send Us a Postcard To-day

asking for a Competition Order Form, and learn the details of the fascinating DE LUZY Competitions open to everyone in the Retail Trade.

We want (i) Proprietors and Buyers, (ii) Managers, and (iii) Assistants, to give us short and helpful answers to a simple, direct business question

and Win £100

divided into 39 handsome Cash Prizes for their valuable advice.

Three Coupons accompany every Competition Order Form, and special terms of purchase are given to all Chemists ordering a minimum supply of £5 worth of goods. Chemists' Assistants at shops where DE LUZY is not stocked may write to us direct for Coupons.

You may complete your Order Form on Receipt, but you need not post your Competition Entry before

Closing Date of Competition, June 23rd, 1922.



General Manager: W. H. CALNAN, 3 LONDON WALL AVENUE, E.C.2.

Telephone: WALL 9966.

A Line That Sells Itself."



The new Elite Hair Cream

made on an Eau de Cologne basis, "CRISOPAL" is the very highest quality Hair Cream obtainable—and QUALITY COUNTS. White flint bottles and red metal-covered corks.

3 oz. ... 8/- ... 3 doz. @ 7/6 4 oz. ... 10/- ... 3 doz. @ 9/6 6 oz. ... 11/5 ... 3 doz. @ 10/6 10 oz. ... 17/6 ... 3 doz. @ 16/6 (Polished Velva—a lovely bottle). Sprinklers 6d. extra 10 oz.

Customer's name on 6 dozen lots. $Terms 5\% \ cash - 2\frac{1}{2}\% \ monthly \ a/c.$

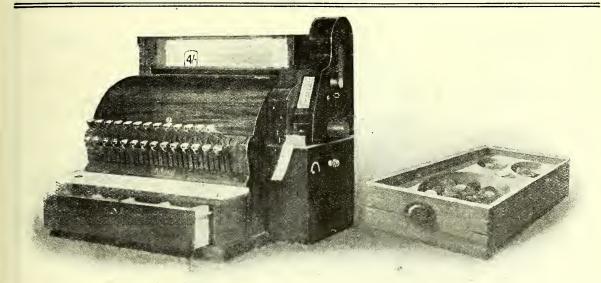
THE TOILET GOODS HOUSE, W. E. BINGHAM & CO., Shudehill, MANCHESTER

Telegrams: "Arneeta Manchester."

Telephone: 1073 City.

Also in bulk.





A Trade and Profit Maker

and a Trade and Profit loser.

Many shopkeepers throughout the country have discontinued to use the open cash drawer in favour of

A New Ticket Printing

NATIONAL CASH REGISTER

recently placed on the Market.

The open cash drawer has no power to increase your turnover and net profit. This new register has, and will. It furnishes many important benefits and will quickly pay for itself.

It is rapid, compact and convenient. Prints a ticket with amount of purchase, date, consecutive number, etc. This enforces accurate records.

Secures customers' confidence and "goodwill." Protects proprietor, assistants and customers. Stops mistakes and losses and satisfactorily settles disputes. Saves much work and worry. Advertises the business.

This new register will cost you less than your open Cash Drawer.

It will increase your trade, and make more money for you.

Get further details. POST THE COUPON TO-DAY.

THE NATIONAL

CASH REGISTER CO., LTD.,

225 Tottenham Court Rd., London, W.1

Branch Offices in all large towns.

J. SMITH, Chemist, 17 High St.

0. 4. 0.

Amount of purchase shown above

028 MAY 6

Specimen of Ticket printed and issued by this new "National"

> The N.C. R. Co., Ltd., 225,

Tottenham Ct. Rd., London, W.1.

Please send without charge or obligation, booklet describing new National Cash Registers.

Name.....

Address.

C. & L

Paris Parfumerie Bourjois Poudre de Riz de Java

No. 45 10/- per doz.

P.A.T.A. 1/3 per box.



No. 495. 7/- per doz.

P.A.T.A. $10\frac{1}{2}$ d. per box.

No. 45.

Made in the following tints: RACHEL, NATUKELLE, BLANCHE, ROSE and BRUNETTE.

A. Bourjois & Cie, Ltd., 66 Carter Lane, London, E.C. 4.

Also Manufacturers of the celebrated "ASHES OF ROSES," No. 2, 15/- per doz.; P.A.T.A. 1/9 per box.



Opportunities for Retailers

We often take back used Cash Registers when customers are installing larger or more up-todate machines. These National Cash Registers,

Thoroughly Overhauled and Rebuilt

sold under Company's full guarantee at reduced prices.

Write for details of "Nationals" available, Dept. R.9, The National Cash Register Co., Ltd., 225 Tottenham Court Rd., London, W.1

G. B. KENT & SONS, LTD.

Are known the World over as the Largest Manufacturers of

> RITISH RUSHES

Please write for full Particulars to-

75 Farringdon Road, E.C.1.

L. LEICHNER'S GREASE PAINTS, &c.

Now to be obtained from your Wholesaler or direct from the

Sole British Agents-

VANITIES LIMITED

15a Whitcomb Street, Pall Mall East, W.C.2.

PRICE LISTS ON APPLICATION.

All lines in stock.

Our Advertising Campaign is in full swing.

5,000,000 Homes are getting the Colorite Messages.

These Advertisements are covering locality—and appear

> Daily Mail Daily Mirror

Home Chat

Home Notes

Home Companion

Weldon's Ladies' Journal Weldon's Bazaar

Lady

Glasgow Daily Record People's Journal

etc. etc. etc.



COLOURS OLD and NEW STRAW HATS.

A 3 doz. Standard Assortment only costs you 34/3! Colorite was an instant success, because—

Colorite is so clean and easy to handle.

Colorite has only 16 shades.

Colorite does Colorite.

A Pharmacist writes :-

"Enclosed please find cheque in settlement of 15 dozen Colorite just arrived.

Next to Colorite is the biggest selling proposition I have experienced in the Pharmacy where there is a very quick turnover."

1922 COLORITE STANDARD

3 Dozen Assortment.

Bottles

6 Dull Black

Gloss Black

4 Navy Blue Dull 2 Navy Blue Gloss 2 Cadet Blue Dull

2 Victory Blue Dull 1 Burnt Straw Dull

3 Brown Dull 1 Yellow Dull

2 Grey Dull
1 Sage Green Dull
1 Old Rose Dull

2 Cardinal Red Dull

2 Cerise Dull

1 Lavender Dull 2 Violet Dull

1 Natural Gloss

Packed with complete set of new 1922 shop advertising, Colorite Cut-out with straw hat attached, dísplay stand, easel sign, window bill, colour cards, and mailing enclosures.

Selling Price 48/- Cost Price 34/3

PROFIT 13/9

CARRIAGE PAID.

CASE FREE.

DO NOT MISS A SINGLE SALE

Order at once direct, or from your regular Wholesale House.

SPECIAL OFFER COUPON.

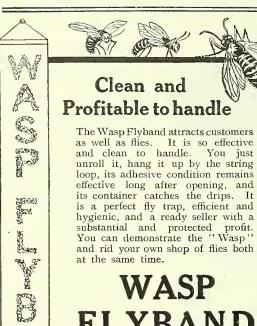
HENRY C. QUELCH & COMPANY,

4 Ludgate Square, London, E.C.4.

Please forward to me, carriage paid, case free, 3 dozen special Colorite Assortment Order, with complete set of window and counter advertising displays.

Name ____

Address ----

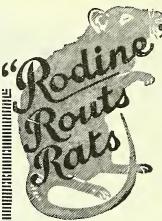


FLYBAND

Write for prices and particulars to the sole manufacturers:

F. W. Hampshire & Co., Ltd., Riverside Works, Derby.





The

The Success of "Rodine"

Simply Marvellous.

On 10th April, 1922, Mr. J. Spencer Palmer, Chemist, Thornbury, writes: "The success of 'Rodine' is simply marvellous and the testimony to its value as a rat destroyer is continually coming in. I recommend it with the greatest confidence. I have now sold it for many years and I am more than ever confirmed in my opinion of its worth."

"Rodine" is attractively advertised, price protected, satisfactory sideline. Show it and it sells. Get it direct from the Maker.

NOW IS THE TIME TO PUSH "RODINE."

T.HARLEY, Manufacturing Chemist, PERTH, SCOTLAND.



Packed in small decorated tins. Immediately soluble in cold water. All Tins Free. No return empties. SPECIALLY ADAPTED FOR EXPORT.

Have now a large sale through CHEMISTS, and early application should be made for illustrated Counter Bills and Showcards.

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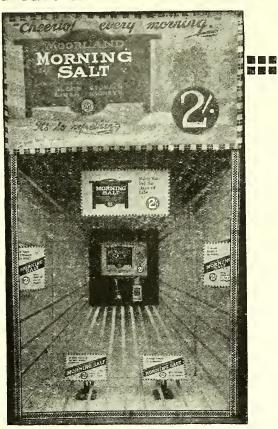
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Coming Events

This section of the "C. & D." is reserved for advance notices of meetings or other events. These should be received by Wednesday of the week before the meetings, etc., occur.

Tuesday, May 16

Pharmaccutical Society of Great Britain. Connaught Rooms, Great Queen Street, London, W.C., at 6.45 p.m. Annual dinner. Tickets (exclusive of wine) 15s. 6d. each, from the secretary to the Dinner Committee.

Wednesday, May 17

Leeds' Chemists' Association. Annual meeting.

Retail Pharmacists' Union. Chemists will meet at Guildford, at
5.30 p.m., to consider the formation of a branch for the area.

Mr. Martin (Christchurch) and Mr. F. B. Wride (Southampton)
will address the meeting.

Thursday, May 18

Thursday, May 18

West Ham Association of Pharmacists, St. James' Hall, Forest Gate, at 6.45 p.m. Social and dance. Tickets (3s. 6d., including refreshments) from Mr. F. R. Maxey, 56 Woodgrange Road, Forest Gate. London, E.

South Wales and Monmouthshire Federation, Cameron Hotel, Swansea, at 3 p.m. Annual meeting. Tea provided by the Swansea and West Glamorgan Association at 5 p.m. At 6 p.m. an open meeting will be addressed by Mr. L. Moreton Parry, Liverpool, member of the Pharmaceutical Council.

London (Western) Pharmacists' Association.—The annual meeting has been postponed until May 25.

English and Welsh News

The Editor would be obliged if subscribers would send him marked copies of newspapers containing items of interest for insertion in this other news sections of the "C. & D."

Dangerous Drugs Act

The Home Secretary informs us that he has made an Order withdrawing from Solomon Levine, 190 Dumbarton Road, Glasgow, the authorisations granted by the regulations made under the Dangerous Drugs Act, 1920, to persons who lawfully keep open shop for the retailing of poisons in accordance with the provisions of the Pharmacy Acts to be in possession of and supply raw opium and to carry on the business of manufacturing, selling or distributing the drugs to which Part III. of the Dangerous Drugs Act applies. Any persons supplying Levine with raw opium or any of the drugs to which Part III. of the Dangerous Drugs Act, 1920, applies will be committing an offence against the Act.

The London Chemists' Costing System

The following are among the alterations in the May issue of the London Chemists' Costing System:

Acaciæ gum. elect., 6d. oz.; acaciæ gum. pulv., 5d. oz.; ac. acetylsal., 2d. dr.; ac. citric., 5d. oz.; aloes Cap. pulv., 3d. oz.; ammon. bromid., 3d. oz., amyli pulv. (rice), 2d. oz.; anthem. flor. Ang., 9d. oz.; arsenic. alb. pulv., 1s. 8d. lb.; balsam. Peru., 6d. dr.; cetaceum, 5d. oz.; collod. flex. meth., 6d. oz.; crocus Valent., 3s. 9d. dr.; cupri sulph. coml., 11d. lb.; ess. menth. pip. (1 in 10) exot., 6d. dr.; ferri arsenas, 11d. oz.; juniperi fruct., 2d. oz.; lin aconiti meth., 5d. oz.; lin. bellad. meth., 7d. oz.; liq. hamamelidis, 3d. oz.; manna elect. nov., 2d. dr.; mel Calif., 2s. lb.; ol. citronel. opt., 2d. dr.; ol. lavand. spicat. gen., 3d. dr.; ol. sassafras nat., 3d. dr.; potas. sulphurat., 4d. oz.; potas. ferricyan., 2d. dr.; sp. camph., 10d. oz; sp. vini meth., 10d. pt.; syr. rhei, 3d. oz.; syr. violæ, 4d. oz.; talc., 3d. oz.; thymol, 11d. dr.; tr. iodi mitis, 10d. oz.; tr. opii, 9d. oz., tr. zingib. fort., 10d. oz. Acaciæ gum. elect., 6d. oz.; acaciæ gum. pulv., 5d. oz.; opii, 9d. oz., tr. zingib. fort., 10d. oz.

Poisonings

The following cases of fatal poisoning, among others, have been recorded since our last report:

At Hadleigh, Suffolk, Dorothy Hale, a hospital nurse, committed suicide by taking cocaine while of unsound mind.

• The St. Pancras (London) coroner concluded, on May 4, his inquest on the body of E. H. Smith, motor engineer, whose death had been certified by Dr. Bernard Spilsbury at the previous sitting (C. & D., April 29, p. 53) to be due to arsenical poisoning. No fresh evidence of importance was fortherning and an even readiet was given. was forthcoming, and an open verdict was given.

An inquest was held at Swindon, on May 8, on the body of an infant named Crane, who, the evidence showed, was found vomiting with a medicinc-bottle in his hand, and died before medical assistance could be obtained. Dr. H. A. Evans said that he was shown an empty bottle, which had contained cough-mixture, issued by the G.W.R. Medical Fund Society. He had made a post-mortem examination and found that death was due to heart failure caused by the taking of a poisonous dose— poisonous because of the child's age—of cough-mixture. The composition of the mixture was not stated. A verdict of "Accidental death" was returned.

Hospital Dispensary Error

The Westminster coroner held an inquest, on May 5, on the body of Arthur Edward Kemp, butler, who died in St. Peter's Hospital, W. 2, after an injection of antimonyl sodium tartrate. Dr. Arthur Herbert Harkness, honorary visiting medical officer at the hospital, stated in evidence that Kemp was suffering from bilharzia. The recognised treatment was intravenous injections of sodium and antimony tartrate in increasing doses from ½ gr. to 2½ gr. until 25 gr. or 30 gr. had been injected. On April 29 witness gave the dispenser an order for $2\frac{1}{2}$ gr. to 10 c.c. of water—a very simple order indeed, and sent the porter down for it. When witness had given the patient 6 c.c. he flushed up

considerably, so witness immediately withdrew the needle. The patient eventually died. A fatal dose by mouth would be from 5 to 10 gr. The dispenser had been with them a year, and had previously given every satisfaction. The bottle was properly labelled, and that led witness to think the solution had been properly dispensed. Mrs. Emily Gwendoline Firminger said she had been dispenser at St. Peter's Hospital for eleven months. She held the assistants' certificate from the Society of Apothecaries, and had been dispensing for seven or eight years. She knew this solution was poisonous. After making it up she thought she had made a mistake, and had calculated on the basis of 100 instead of ten. The Coroner: What is your husband?—An automobile engineer. Don't you think you ought to stay at home and look after your family ?-I haven't got a family. I suppose there is no real need for you to work, is there?—My husband is delicate. He is not fit to do a great deal of work. Witness added that the instructions for the solution were given verbally by the doctor, and she wrote them on a piece of paper. The coroner, in summing up, said the question for the jury was what amount of blame fell on Mrs. Firminger, who seemed to be a competent dispenser, and had had a great deal of experience. The jury returned a verdict of "Death from misadventure."

Leeds

Mr. William Godden, B.Sc., F.I.C., lecturer in agricultural chemistry in the University of Leeds, has been appointed head of the bio-chemical department at the Rowett Institute, Craibstone, Aberdeen. Mr. Godden is the author of several publications dealing with agricultural chemistry.

In the "Yorkshire Evening Post" of May 5 appears an account of a journalist's hunt for drug addicts in Leeds. A chemist on whom he called put the case from his standpoint concisely: "You may take it from me that where the evil is prevalent it is never through the chemist that it is procured. The regulations and police inspection are too close. . . . Methylated-spirit drinking is the vice we chemists have to contend with. It was especially bad during the war, particularly during the week-end. We got to know that sixpennyworth of 'meth' was a suspicious order, and though we had no legal right to do so we used to refuse to serve anyonc we suspected."

Liverpool

Several "Peldo" displays are current, and repeat sales ensue.

Mr. A. Elder, Ph.C., Birkenhead, is holiday-making in the Isle of Man.

The monthly revision of the C. & D. Retail Price List is a much-appreciated feature.

Mr. John H. Robinson has had the interior of his pharmacy redecorated in artistic fashion,

Mr. Henry Gainford, Lark Lane Pharmacy, is recuperating at Torquay after an attack of rheumatic fever.

Mr. R. H. Barker, chemist and druggist, chairman of the Windermere Urban District Council, is spending a holiday on Mersevside.

"Mother, what is he talking into his own ear for?" The question was put by a small boy standing at the pharmacy counter when the chemist was answering a telephonic call.

After over fifty years' absence, Mr. Henry Peet has revisited the Lincolnshire village in which he spent his school-days. Only one house has been erected during the long interval.

Mr. J. L. Hirst, secretary of the Liverpool Chemists' Association, thinks it is time that editors of daily newspapers should be asked to consult the Register of Chemists and Druggists before describing anyone as a qualified chemist or dispenser.

The late Mr. Frederick J. Parker, whose death was announced in the C. & D. of May 6 (p. 51), is gratefully remembered by the Liverpool Chemists' Association—

among other things, because of his illustrated lecture, years ago, on Norway, Mr. G. G. Hemingway (Prescot) and the late Mr. James Shacklady assisting with the photographs.

Manchester

A lecture, with lantern illustrations, was delivered before the Manchester section of the Society of Chemical Industry on May 5 on the extraction of vegetable oils Mr. R. A. Bellwood was the lecturer.

The Manchester Chamber of Commerce has decided to urge the Government to set up a committee of financial, commercial, and industrial experts to examine the proposal under which ten pennies would count to the shilling instead of twelve.

Mr. J. C. Kidd, chemist and druggist, Cheetham Hill, has been elected chairman of the Crumpsall Institution (the largest poor-law institution in the country) for the second year in succession. Mr. Kidd is also chairman, for the third year in succession, of the Dr. Rhodes Home.

The second meeting of the session of the Manchester and District Pharmaceutical Golfing Society was held at the Manchester Golf Club, Hopwood Links, on May 3, when about twenty members turned out to try their luck. After a strenuous afternoon's golf—and anyone who has played on this course will agree that it is one of the most difficult courses to negotiate in this part of the North of England—Mr. J. H. Blyton came in a winner with the net score of 81, Mr. Potts coming second with 83 net—both very creditable performances. As Mr. J. H. Blyton was giving the first prize (a pair of silver vases) this prize was awarded to Mr. Potts, and the second prize (a silver cake-dish) was awarded to Mr. Blyton.



Photo.] [Leteworth.

Left to right: Mr. J. H. Blyton, Mr.

A. J. Pidd (President), Mr. J. A. Collins (secretary).

After tea quite a number of the competitors went round the course again, the last foursome coming in about 9.15. Everyone voted the meeting a great success. Golfing enthusiasts are requested to remember that the most important match of the season will be held on May 24, when the members of the Manchester Society meet the Liverpool golfing chemists in a match at Chorlton Golf Links. Being their first encounter, both sides are naturally looking forward to the match.

Nottingham

It is "between seasons" just now, but Nottingham chemists, despite the slackness of trade, are doing good business. A large number of bronchial-pneumonia cases among children have sprung up within the past week.

The welfare department of Boots, Ltd., has inaugurated what will undoubtedly prove a boon to the company's lady assistants in Nottingham. A farmhouse called "The Retreat," situated amid delightful surroundings at Barton, a few miles from Nottingham, has been taken over for

the summer. Here the girls will be able to spend their week-ends, and even their holidays, for a modest sum.—After listening to speeches by two local members of Parliament, the Nottingham employees of Messrs. Boots decided, on May 1, to form among them a sub-branch of the local section of the League of Nations Union.

Sheffield

Mr. F. Medley makes effective use of coloured streamers in the windows of his two pharmacies.

The twenty-fifth anniversary of the granting of a charter to Sheffield University occurs this month.

An inspector of the Pharmaceutical Society has been examining certificates in pharmacies in this district during the week.

"War-time" bottles, the capacity of which varies by as much as 20 per cent., are still to be met with, and chemists need to check the capacity of samples from time to time.

Mr. R. Y. Greenfield, son of Mr. H. H. Greenfield, chemist and druggist, Hunter's Bar Pharmacy, has passed the examination of the Northern Universities Conjoint Board in metallurgy.

Wor. Bro. J. T. Appleton was appointed and invested Provincial Grand Director of Ceremonies by the Rt. Wor. Provincial Grand Mark Master of West Yorkshire at the recent annual meeting at Doncaster.

In the course of a speech to the Sheffield Chamber of Commerce and manufacturers, on May 9, Sir Eric Geddes declared that the only thing that matters in this country is to reduce taxation; industry cannot "get going with this load of debt hanging around its neck."

Miscellaneous

COCAINE-TRAFFIC CASE.—At Cardiff, on May 6, Ferdinand Caden, an Italian ship's officer, was fined £50 for "importing" cocaine found in his cabin.

SHOPPING-WEEK AWARDS.—In the window-dressing competitions held during the Canterbury shopping-week, A. Lander & Sons secured the second prize in the class open to chemists; the third prize was awarded to Boots, Ltd., and Walker & Harris, Ltd., Sun Street, were highly commended.

POISON-LICENCE APPLICATIONS.—H. Simmonds & Son, Chipperfield, have applied to the Hertfordshire County Council for a licence to sell horticultural poisons.—Winchester City Council has granted licences under Section 2 of the Poisons and Pharmacy Act, 1908, to Mrs. M. E. Frampton, Mr. H. S. Frampton, Mr. A. R. Hillier, and Miss H. Restall.

WINDOW-DRESSING EXHIBITION.—An exhibition, announced as "The Exhibition of Commercial Display," is to be held at the Horticultural Hall, Westminster, from May 24 to June 1. All kinds of goods are to be represented, and a course of instruction has been arranged for members of the British Association of Display Men. Further particulars may be obtained from Mr. J. Ernest Cheetham, 6 and 7 Redcross Street, London, E.C. 1.

LONDON CHEMISTS' GOLFING SOCIETY.—The first open meeting of the season was held at Old Fold, Barnet, on May 4. The wind was troublesome. The first round was for the President's prize, and resulted as follows:

C. A. Macdonald ... 81 – 5 = 76 | W. Ballantyne ... 96 – 11 = 85 | H. G. Pickles ... 92 – 15 = 77 | H. E. Benwell ... 100 – 12 = 88 | A. Harries ... 94 – 15 = 79 | H. Marshall ... 106 – 16 = 90 | W. Main ... 89 – 8 = 81 | M. W. Carmichael ... 99 – 8 = 91 | F. Cooper ... 96 – 12 = 84 | E. Geddes 111 – 18 = 93 | In the second round, for Mr. Pinchen's prize, Mr. W. Main was the winner with 5 down on bogey. There were thirty-four competitors.

SHANGHAI CHEMICAL SOCIETY.—A meeting was held recently at which British, American, and Chinese chemists and teachers of chemistry discussed the advisability of forming a chemical society in Shanghai. A committee was appointed, consisting of Messrs. Himus, Chow, and Bryant, to draw up a plan of organisation.

Irish News

Brevities

Dr. J. Kane, Dublin, has been appointed analyst to the Meath County Council.

Mr. George C. Hewson, Ph.C., Ballina, co. Mayo, is opening a branch pharmacy in Foxford.

A pharmacist's assistant named Charles Lavelle, Coalisland, co. Tyrone, was shot dead on the roadside at Annagher, co. Tyrone, on May 4 by a number of armed men. Deceased, who was twenty years of age, was an assistant with Mr. E. Byrne, Ph.C., Coalisland, and was studying for his examination.

At a meeting of Londonderry Board of Guardians, on May 6, the clerk intimated that he had obtained a quantity of anti-meningococcus serum from Dr. Gardner Robb, University Square, Belfast, and Dr. Robb, in returning the money sent for payment, said the serum is supplied to him by the Rockefeller Institute, New York, without charge in recognition of some work done in connection with meningitis cases in Belfast, when the serum was first introduced. He is always glad to share his supplies with any doctor who has heard of it. It is much more potent, he stated, than any serum which can be purchased.

Belfast

Mr. W. R. H. Orr, R.D., Ormeau Road, has been appointed a member of the Select Vestry of St. Jude's Church, Belfast.

Mrs. Edith Whan, who reappeared at the police-court on May 9 on a charge of attempting to murder Mrs. Agnes Walker by means of poisoned chocolates sent through the post, was discharged, the stipendiary holding that there was not sufficient evidence to show that the handwriting on the parcel containing the chocolates was that of Mrs. Whan (C. 4: D. April 29, p. 52).

Whan (C. & D., April 29, p. 52).

The annual competition for the McMullan Challenge Cup has been fixed for June 1 on the links of the Knock Golf Club, Belfast. Mr. W. J. Hardy (Davidson & Hardy) has invited the competitors to lunch in the clubhouse, after which a short business meeting will be held to elect the committee. The competition is confined to members of the Ulster Retail Drug Trade Association and those in connection with the drug-trade in Belfast and district, subject to the approval of the committee. Mr. A. Leitch is the present holder of the cup.

Business Changes

Mr. J. H. Jackson has purchased the pharmacy at 4 Morley Street, Plymouth, and is reopening it as from May 13.

May 13.

Mr. R. H. Hothersall, chemist and druggist, 322 Union Road, Oswaldtwistle, has taken over the business of Mr. A. T. Monk, chemist and druggist, 154 Union Road.

J. Taranto & Sons, opium and gum importers, Smyrna, announce the retiral of their senior partner, M. Josué Taranto, who founded the firm in 1868. The business will be carried on as heretofore by his sons, MM. Lévy, Léon and Vitali Taranto.

MR. CHARLES A. J. TROUGHTON, Ph.C., M.P.S.I., chemist and druggist, late of Butler's Medical Hall, Dublin, has acquired the pharmacy of Mr. A. Priestland, 38 Parliament Street, Ramsey, Isle of Man, and will be responsible for debts incurred on and after January 1, 1922.

A TEST FOR INSECTICIDES.—The Paris correspondent of "The Morning Post" quotes the following placard seen in a dealer's shop:

Ici on achète les punaises vivantes à raison de 3 francs le cent, mais pas à moins de cette quantité.

The dealer explained, in reply to a question, that he had as his customers vendors of insecticides, who used his stock as the *corpora vilia* to demonstrate the excellence of their wares, and that in three days he had had a turnover of eighteen hundred "head."

Scottish News

Brevities

The pharmacy of Mr. G. C. McGonigal, ehemist and druggist, Carnoustie, was broken into on May 6 and a sum of money stolen.

Mr. J. T. Wilkie, chemist and druggist, proprietor for the past few years of the business known as A. L. Wilkie, 25 High Street, Galashiels, is now earrying it on under his own name.

Edinburgh

Tuesday, May 23, will be a holiday in Edinburgh.

A draft ordinance in connection with the proposed degrees of B.Sc. and D.Sc. in technical chemistry was agreed to at a meeting of the General Council of Edinburgh University on May 3.

Fife

In the current issue of the "Scottish Historical Review" are published copies of the accounts for medicines and treatment supplied by two Kirkcaldy doctors, Robert Scott and Archibald Arnott, against Lady Raith and Sir John Wemyss respectively. Among the items for Lady Raith, in 1710, are: 1 drop oil of cloves, 4s.; Pott Venice turpentine, 17s.; Ane large liniment with chyminal oils, £2 12s.; Ane dose Mathe's pils, 12s.; Sweet spirit niter, £1 18s.; Volatilo salt ammoniach, 13s.; Ane vomiter, 12s.; Jesuit's powder, 18s.; Ane Defensive plaster, 10s.; Ane mutchkin pennyroyal water, 8s.; Purging materials, £2 14s.; Arsenick 3 doses, £1 10s. In the Wemyss account appear: The potion with addition, £1 14s.; A fomentation for My Ladie, £2 9s.; The tincture to you, £2 9s.; The Syrup of Viollots, £1 5s.; Laudanum (frequent), £1 5s.; Julep to Miss Babie, £1 19s.; Powders to her and Miss Ann, £2 8s.; Powders and oylls for bodie and cofin, £24.

Glasgow Pharmaey Club

The first rink game of the season of the bowling section of the Glasgow Pharmacy Club will be played on Mount Florida bowling green on May 16. After the game the draw for the first round of the single-handed competition for the W. Greig trophy will take place. Names of intending competitors should be in the hands of the secretary, Mr. G. Thomson, by May 16.

At the musical festival which is being held in the St. Andrew's Halls from May 3 to 13, the dramatic section of the Glasgow Pharmacy Club obtained the second place in the ensemble (dramatic) elass. The test-piece was from Shakespeare's "As you like it," IV. 1, Rosalind, Celia, and Orlando being represented by the Misses Rankin and MacGregor and Mr. D. G. Maekenzie respectively. The combined marks awarded to these ladies were only three fewer than to the winners, who are members of the Scottish National Players. This is the second year in succession that Miss MaeGregor has gained higher marks than any other competitor playing her particular part. The section's next venture, which is arranged to take place in the Athenaeum in October, will be Sir J. M. Barrie's "Professor's Love Story."

Festivities

Liverpool Pharmacy Club Fancy-dress Ball

THE first faney-dress ball of the Liverpool Pharmacy Club, held recently at the Yamen Café, proved a gratifying success. Mr. F. Boggiano, who had organised the ball and acted as M.C., received congratulations all round, and all who had sold tickets were thanked. The company numbered 160.

Owl Spear Club Dance

Members and friends of the Owl Spear Social and Athletic Club (Heppell's employees) enjoyed a pleasant evening on April 28 at a dance held at Hammersmith. About eighty were present. Mr. Yeatman officiated as M.C. The Club's hon. secretary (Mr. Chas. Fr. Cullingham) is open to receive cricket challenges for the season at 6 Linden Grove, London, S.E. 15.

South African News

(From "C. & D." Correspondents.)

"The Chemist and Druggist" is supplied weekly to members of all the Chemists' Societies in South Africa.

Presentation to Mr. Fyvie.—A representative gathering of Durban elemists met at the Town Hall on March 28 to make a presentation to a popular member of the craft, Mr. A. Fyvie. Mr. Fyvie has been retail manager of the Durban business of Lennon, Ltd., for the past eleven years, and is now relinquishing that position to take over the business of Stantial & Allerston, Pietermaritzburg. Mr. Tyson, in presenting Mr. Fyvie with a silver salver and a purse of gold, on behalf of the chemists of Durban, touched upon the valuable services rendered by Mr. Fyvie. He also spoke of the very great esteem in which he was held by his confrères, and wished him the greatest success and happiness in his new venture and surroundings. Mr. Morris Stranack, on behalf of the Natal Pharmaey Board, spoke in appreciative terms of Mr. Fyvie's work as a member of that body. Mr. D. S. B. Anderson, chairman of the Board, was unable to be present, and wrote of the loss that Durban chemists would sustain by Mr. Fyvie's removal.

Society of Public Analysts

AT a meeting of the Society of Public Analysts, held on May 3 in the Chemical Society's Rooms, Burlington House, London, W., Mr. P. A. Ellis Richards in the chair, a paper on Studies in the Titration of Acids and Bases was read by Messrs. J. L. Lizius, B.Sc., and Norman Evers, B.Sc. New indicators or combinations of indica-tors were recommended, giving sharp colour changes at the end-point and greater accuracy of results than the indicators commonly in usc. Methods of determining the hydrogen ion concentration of the true end-point of a titration were described, and a table of titrations given showing the hydrogen ion concentration of the end-point, the best indicator, the sharpness of the end-point, and the accuracy to which results may be obtained. In a paper on Graphites and other Peneul Pigments Mr. C. A. Ainsworth Mitchell gave further details of his microscopical method of examining graphites, the results being property with the chamical convention of various graphites. scopical method of examining graphites, the results being compared with the chemical composition of various graphites and pencil pigments (old and modern), including a specimen of graphite from Egypt (B.C. 1500). Analyses were also given of the pigments in typical coloured pencils, and their differentiation in markings on paper were discussed. The next paper was on Inadequacy of "AR" Test for Alkalis in Calcium Carbonate, by Messrs. W. Singleton and H. Williams. The authors find that the "AR" method for determining alkalis in ealcium carbonate is inadequate, and requires revision, as in several bonate is inadequate, and requires revision, as in several samples of "AR" quality they found that only about 10 per eent. of the total alkalis present in the calcium carbonate are removed by one extraction with distilled water according to the "AR" method. Even after five extractions of the substance with water only about 15 per cent. of the total alkalis present were removed, and only about half the total of five extractions is removed by the first treatment. Mr. J. C. Drummond then gave a paper on The Sulphuric Acid Reaction for Liver Oils, and its Significance. The chromogenic substance giving the characteristic colour reaction, he said, appears to be a normal constituent of the liver, the author having found its research in the liver of mean and twenty on other it present in the liver of man and twenty-one other It seems to have a distinct relationship to vitamin A; for example, a number of samples of eod-liver oil of known purity, elassified according to intensity of their colour reactions with sulphuric acid, were found to be also classified in the order of their vitamin A content. The colour reaction is correspondingly feeble for oils obtained from animals deprived of vitamin A. Attempts to trace the origin of the ehromogenic substance in the food of the eod failed. The few properties of the substance which are known, as well as the available data regarding its distribution, show certain resemblances to the unidentified vitamin A.

Legal Reports

Shops Act.—An appeal has been entered against the conviction at Bow Street Police Court, on May 1, of J. M. Davis & Sons, Ltd., Coventry Street, W., for a breach of the Shops Act, 1912, by selling a condomo during the time when the shop was closed, under the Weekly Half-holiday Order (C. & D., May 6, p. 43). Mr. Kirby, solicitor for the appellants, attended at Bow Street on May 8 to notify formally the appeal, and Mr. Theodore Morgan Davis and Mr. Trennor Chinnick Davis, directors of J. M. Davis & Sons, entered into recognisances for the due prosecution of the appeal, and the payment of costs in the event of the appeal failing.

Winding - up a Company.—At Bow Street Polico Court, London, on May 10. before Mr. Chester Jones, William Desmond Noble, Well Street, Cable Street, London, E., was summoned, as being a director of Noble's Drug Stores, Ltd., at the time of its winding-up, for unlawfully and without reasonable excuse making default in complying with the requirements of Section 147 of the Companies (Consolidation) Act, 1918. Mr. Newington, who supported the summons on behalf of the Board of Trade, explained that the company was ordered to be wound up in July 1921, and that the defendant failed to submit to the Official Receiver within the proper time the prescribed statement of affairs showing particulars of assets, debts, and liabilities. After long delay a statement was ultimately filed by the defendant in February last, but it was found to be inaccurate and incomplete, particularly in regard to the absence of any explanation as to how a deficiency of £4,000 arose. The defendant pleaded that the delay in furnishing the statement, and its incompleteness, were due to unavoidable causes, but the magistrate told him that the law must be complied with. Mr. F. G. Walkley, an examiner in the office of the Official Receiver, gave formal evidence in support of the summons, and stated that the defendant was still carrying on business as a chemist. The magistrate, in imposing a fine of £10 and £5 costs, said the defendant must understand that that would not absolve him from the duty, still incumbent upon him, of furnishing the particulars called for.

Borax Prosecution.—At Halifax Borough Court, on May 9, Mr. John Patchett, chemist and druggist, 140 Gibbet Street, was summoned for having sold borax which was found by the borough analyst (Mr. H. T. Lea) to contain 170 parts of arsenic per million. Mr. Patchett, for whom Mr. R. Wilkinson, solicitor, appeared, pleaded "Not guilty." The evidence of purchase was to the effect that "refined borax" was asked for, and that 2½d. was charged for 4 oz. Dr. Banks, medical officer of health, cross-examined by Mr. Wilkinson, said he was not aware of any standard for commercial borax. Mr. Wilkinson: The only standard is not refined borax, but purified borax, according to the standard laid down by the B.P.?—That is the only standard that I am aware has been fixed by Government. Is there such an expression throughout the B.P. as "refined borax"?—No, there is not. Do you suggest that the terms "refined borax" and "purified borax" are synonymous?—That is what I should expect. Mr. Chislett, in reply to a question from the chairman said the only horax which was recognised the chairman, said the only borax which was recognised in the B.P. was purified borax, which should not contain more than 5 parts of arsenic to the million. If in these cases refined borax had not been asked for, the summons probably would not have been issued. Prior to the war, said Mr. Chislett, borax was considerably better than now. Mr. Wilkinson submitted, in the first instance, that he had no case to meet, on the ground that it was the duty of the prosecution to prove that refined borax was a drug, and they had made no effort to do so. Secondly, he submitted that the inspectors got what they asked for—refined borax. There was a difference between refined borax and purified borax. Nowhere throughout the British Pharmacopæia was there a suggestion that there could be any standard for refined borax, but there was for purified orax. Mr. Patchett, giving evidence, said he had been business thirty-two or thirty-three years. There

was a difference between purified borax, as mentioned in the B.P., and commercially refined borax. Mr. Wilkinson: Would you call refined borax a drug as distinguished from purified?—No. And you would not use it as a drug?—No. The Chairman: If a person came to the shop and asked for borax, would you ask what kind of borax he wanted?—Very often we do, but occasionally we do not. If I had been asked for purified borax I should have supplied purified borax. By Mr. Chislett: The dose of purified borax was 5 to 15 gr., and a person would not ask for 4 oz. if it was required for medicinal purposes. The Bench dismissed the case on payment of costs, the chairman remarking that it was to be hoped the attention of the authorities would be drawn to these cases "so that they can approach the really responsible people." A grocer whose refined borax yielded on analysis 350 parts of arsenic per million was similarly ordered by the Bench to pay costs.

Rat Poison Damages Claim.—In the King's Bench Division on May 8, before Mr. Justice Sankey, a farmer named Ford claimed £568 16s. 9d. damages for alleged negligence by the Buckinghamshire County Council in placing and leaving on his farm poisonous substances. The rat officer under the Rats and Mice (Destruction) Act, 1919, entered upon plaintiff's premises and placed poison thereon. The plaintiff said that the entry and deposit of poison were wrongfully and negligently made. because the conditions laid down in the Act of 1919 had not been followed, and the poison was deposited indiscriminately and without skill and reasonable care, and no precautions were taken by the defendants to safeguard his stock or to enable him to safeguard such stock from the risks of the poison. The plaintiff said that by reason of such action of the defendants he had suffered heavy losses in that several of his animals had eaten or otherwise absorbed the poison and had suffered or died, and he claimed damages. Defendants state that the rat-catcher acted throughout with skill and care. He spread a number (about thirty) of small pieces of bread with poison of no greater strength than was necessary, and put them down the various rat holes and covered the holes with stones. The defendants relied on the provisions of Section 1 of the Public Authorities Protection Act, 1893, and said that the acts complained of were done by the defendants in the execution of their public duty. If the poison de-posited caused any damage to the plaintiff (which was denied), the cause of action arose and the damage therefrom (if any) occurred more than six months before the commencement of the action. Defendants contend that the trouble was caused by certain salvage flour and dates which Mr. Ford gave to his animals. Plaintiff, in his evidence, said that his farm was singularly free from rats and mice. Mr. Prudames, veterinary surgeon, who was called to see the various animals, said the symptoms were those of phosphorus poisoning. Professor Neville, of University College, Reading, found phosphorus in the pigs' viscera sent to him for analysis by Mr. Ford. Dr. Bernard Dyer, public analyst and official agricultural chemist to a number of counties, described the chemical composition of "Rodine," which contains 19 or 20 grains of phosphorus in a 1s. 3d. tin. This witness also gave evidence as to the symptoms of phosphorus poisoning. Mr. Thomas, opening the defendants' case, said that Edwards, the rat officer, was sent to the plaintiff's farm in consequence of a request from the plaintiff. He was provided with half a tin of Rodine (containing about 10 grains of phosphorus) spread on thirty pieces of bread, and some non-poisonous bait. The non-poisonous bait was used inside buildings or in places where cattle might get at it. The poison was laid in out-of-the-way places. Mr. Edwards, who gave evidence corroborating counsel's opening statement, said, in cross-examination, that he was not told that all poison must be removed in the morning and that all cattle and other animals must be locked up till that was done. He had heard that he had poisoned a hen belonging to the farmer. He did not see or hear a single rat on the plaintiff's farm, but there were holes and runs, which he could tell were fresh. Sir John McFadyean, of the Royal Veterinary College, said that

the 10 grains of phosphorus contained in the rat poison laid down was insufficient to cause the fatalities and iliness among the plaintiff's cattle and pigs. Giving judgment on May 10, Mr. Justice Sankey said that on the evidence he was satisfied that some of plaintiff's stock had died of phosphorus poisoning, although, after hearing the expert evidence, he was of the opinion that one could never tell the exact fatal dose of phosphorus for animals. He could not get over the evidence that there was phosphorus found on analysis in the bodies of some of those animals, and he was driven to the conclusion that he could not rely on the evidence of Edwards as to the amount of poison he put down, and he was satisfied that plaintiff's farm was "dressed" with much more of the stuff than Edwards was willing to admit, and he was not surprised that the result was disaster. He also found that there was no request by Mr. Ford to the defendants. As to the defence and the protection of the County Council by the Rat Order, he did not think the Order gave the defendants power to trespass on the farm and lay poison, and he thought they really were trespassers, and that Edwards went on to the land without any right, and in defiance of express warning. On the question that defendants were excused by the Public Authorities' Protection Act, under which, they submitted, plaintiff could claim only in respect of damage occurring within six months, he was of the opinion that the County Council were not acting in the intended execution of any Act of Parliament, because their whole case had been that they were acting under request, and not under any Act of Parliament. On the question of the damages claimed, his Lordship expressed the opinion that these were exaggerated. There would be judgment for the plaintiff for £150, with costs.

New Companies and Company News

P.C. means Private Company and R.O. Reg stered Office:

Bedford Chemical Co., Ltd. (P.C.).—Capital, £1,000. Objects: To carry on the business of manufacturers of and wholesale and retail dealers in chemicals, disinfectants, etc. R.O.: St. Mary's Commercial Chambers, St. Mary's Street, Bedford.

ORIENTAL DRUG AND SUPPLY Co. (CLITHEROE), LTD. (P.C.).—Capital, £500. Objects: To carry on business as indicated by the title. The first directors are: J. H. Thorne, T. V. Thorne, and Ethel W. Thorne. R.O.: 44 Salford, Clitheroe.

East Ham Shopping Hall, Ltd. (P.C.).—Capital, £10,000. Objects: To enter into an agreement with W. A. Evens and to carry on the business of constructors and owners of marketing and sliopping halls, provision dealers, druggists, etc. R.O.: Wakefield House, Wakefield Street, East Ham.

Goddon & Co., Ltd. (P.C.).—Capital, £1,000. Objects: To take over the business of a manufacturing chemist and druggist, dealer in patent medicines and appliances and proprietary articles carried on by G. A. Goddon at 49 Lamb's Conduit Street, W.C., as "Goddon & Co." R.O.: 49 Lamb's Conduit Street, London, W.C. 1.

T. S. Stonier, Ltd. (P.C.).—Capital, £3,000. Objects: To acquire the business of a chemist and druggist carried on by T. S. Stonier at 6 Railway Street, North Shields, as "T. S. Stonier," and to carry on the business of drysalters, herbalists, Italian warehousemen, opticians, oil and colour men, etc. R.O.: 6 Railway Street, North Shields.

TRINGHAMS (CHEMISTS), LTD. (P.C.).—Capital £1,500. Objects: To take over the business of druggists' sundriesmen, patent and other medicine vendors, druggists, etc., carried on as "J. Tringham" at the "Drug Stores," Humber Road, Coventry. The first directors are: J. and Mrs. A. L. Tringham, Humber Road, Coventry, and A. J. Cooke, 7 The Square, Kenilworth. R.O.: Humber Road, Coventry.

Radior Co., Ltd. (P.C.).—Capital, £100. Objects: To acquire the business now or recently carried on by E. Miller at 24 Chilworth Street, Paddington, W., as "The Radior Co.," and the recipes, trade-marks, and formulas of the process of manufacturing and the right to manufacture and deal in certain toilet and medicinal preparations.

Amalgamated Chemical Co., Ltd. (P.C.).—Capital, £3,500. Objects: To carry on the business of manufacturing, wholesale, and retail chemists, analytical and experimental workers, manufacturers of and dealers in all goods usually dealt in by chemists, soaps, brushes, glass, and fancy articles, articles of the toilet, etc. R.O.: 39 Victoria Street, London, S.W. 1.

Lancashire Soap and Chemical Co., Ltd. (P.C.).—Capital, £20,000. Objects: To carry on the business of makers of and dealers in soaps, soap powders, cleansing and polishing preparations, manufacturers and refiners of and dealers in waxes, fats, oils, lubricants, and greases, chemists, druggists, etc. The first directors are: C. Briede, 34 Aberdour Road, Goodmayes; P. C. Balcon, 232 Pershore Road, Birmingham; and J. A. Weil. Helvetia, Leicester Road, Higher Broughton.

United Phosphate and Malt Co., Ltd. (P.C.).—Capital, £4,000. Objects: To carry on the business of importers, manufacturers of and dealers in phosphates and other chemicals, bakers' and confectioners' supplies, malt flours, malt extracts, and other malt products, etc. The first directors are: L. Briant, Forest Green House, Ockley, Surrey; E. P. Hutschek, 68 Church Street, Kensington, W. 8; A. J. Walker, Dean Lodge, Felixstowe; and A. R. Lorimer, 2 Chesterfield Mansions, Highgate, N. R.O.: Needham Market.

J. & E. Atkinson, Ltd., announce a dividend of 5 per cent., less tax, for year, payable May 31, carrying £3,572 forward, after transferring £40,000 from reserve, leaving the latter at £110,000.

ALFRED BISHOP (SUBSIDIARIES), LTD.—At a meeting held in London, recently, it was resolved that this company be wound up voluntarily. Mr. S. H. Bersey, 53 New Broad Street, London, E.C. 2, was appointed liquidator.

BOVRIL, LTD.—Mr. William A. Harris, who has been the secretary since the formation of the company, has been elected a director. Sir Cornthwaite Rason has been appointed secretary, with Messrs. F. M. Barringon and J. H. Crisp as assistant secretaries.

Amsterdam Quinine Factory.—At the general meeting of shareholders, held on April 7, the balance-sheet was approved, and it was decided to pay a dividend of 140 florins (120 florins in the preceding year) on each share. The retiring director, Heer W. Sieger, was unanimously re-elected.

Hooper, Struve & Co., Ltd.—The report for 1921 shows a gross profit of £11,000 and a net profit of £5,500. The latter figure is reduced to £3,200 by the adverse balance of £2,300 brought into the accounts, and is then turned into a deficit of £300 by the payment of £3,500 balance of compensation to the late managing director. There is nothing available for either the preference or ordinary shareholders. The rebuilding of the factory at Brighton is being proceeded with, and it is hoped that the work will be completed in time for summer business.

Joint-Stock Companies.—Notice is given in the "Lendon Gazette" that the names of the undermentioned companies have been struck off the register, and the companies dissolved: Birkett Chemical Co., Ltd.; Evans Drug Stores, Ltd.; Hardy Fertiliser Co., Ltd.; Imperial Quinine Co., Ltd.; Karsam Soap Co., Ltd.; Kellett's Glue and Chemical Co., Ltd.; Pearson's Soap Works, Ltd.; Antiseptics, Ltd.; Artificial Pumice, Ltd.; Bute's Pharmacy, Ltd.; Cosmo Chemical Co., Ltd.; D. J. Matthews Drug Stores, Ltd.; John Campbell (Soapmaker), Ltd.; Kent Toilet Requisites, Ltd.; Walbrook Pharmacies, Ltd.; West End Manufacturing Perfumery Co., Ltd.

Bankruptcy Reports

Re Howard Ephraim Hall, trading as Hall & Son, 41 George Street, Luton, chemist and druggist. The public examination of this debtor was held on May 4 at Luton. The debtor was questioned regarding his affairs, and said that an account showed that on his gross profit of £699 the net profit was only £115, and his personal drawings were £341. He became aware of his position in January, but he did not file his petition until he was compelled to do so, because he was trying to sell the business. The following are among the creditors: Burge, Warren & Midgley, Ltd., £10; Butler & Crispe, £96; Corbyn Stacey & Co., Ltd., £10; Cupal, Ltd., £21; Evans Sons Lescher & Webb, Ltd., £23; Horlick's Malted Milk Co., £10; Wootton & Webb, £97.

Re Irving Alexander Keene (described in the receiving order as the Keene Co.), 52 Gray's Inn Road, London, W.C., chemical merchant. This debtor attended before Mr. Registrar Francke on April 28, at the London Bankruptcy Court, for further examination upon his affairs. He failed in October 1921 with total liabilities £11,168 (unsecured £10,818), and assets valued at £2,046. The previous sitting for the debtor's public examination was adjourned in consequence of his refusal to state to the Official Receiver or trustee the formulas of certain proprietary medicines claimed to be part of the estate, and as such vested in the trustee. Mr. E. W. Hansell reported that an appeal had been lodged against the decision of Mr. Justice Astbury, holding that the debtor must furnish the particulars required by the Court, and under those circumstances it was not convenient to proceed that day with the debtor's public examination. The sitting was further adjourned till June 16.

Re Louis Victor Alexander, drug-storekeeper, trading as the East Cornwall Drug Co. at 107 Fore Street, Saltash. The liabilities are stated to amount to £374, of which £362 is expected to rank for dividend, while the assets are expected to produce 7s. 2d., leaving a deficiency of £361 13s. 7d. The account filed by debtor was stated to have contained an entry relating to an anexplainable deficiency. According to the Official Receiver, planable dehetency. According to the Official Receiver, debtor was forty years of age, and before the war was employed in a chemist's shop. On demobilisation from the army he was unemployed for nearly a year, and then agreed to take part of 107 Fore Street, Saltash, his capital being £60, which was used for stock. Debtor had stated that an "uncle," who was understood to be a qualified chemist, arranged to join him in the business, but not as a partner, and he alleged that the uncle referred but not as a partner, and he alleged that the uncle referred to gradually assumed full control of the business, debtor being in the position of a scrvant. Matters continued in that way until six weeks before the petition was filed, when the uncle suddenly left and debtor ascertained the full extent of his liabilities. A banking account in the uncle's name was used in connection with the business, and the uncle made all payments to the bank and drew all cheques. Mr. A. D. Breeze, a creditor, pointed out that Alexander had been made the scapegoat of the business, and the responsible party got off scot-free. The public examination was fixed for May 26.

Gazette

Partnership Dissolved

Clegg, J., and Woolfenden, F., Mabel Mill, Smithy Bridge, near Rochdale, soap and chemical manufacturers, under the style of Solvo Chemical Co.

The EYES HAVE IT.—"When using eye-baths there should always be two in use—one for each eye. They can be purchased in colours, to discriminate left and right, for if one eye-bath is used for both eyes, one eye that may contain an infinitesimal germ will defile the eye-glass and impregnate the clear eye..."—"Daily Express."

British Pharmaceutical Conference

A MEETING of the Executive Committee was held at 16 Bloomsbury Square, London, W.C., on May 3, the President (Professor H. G. Greenish) in the chair. There were also present: Messrs. F. W. Gamble, E. T. Neathercoat, E. Saville Peck, F. Ransom, and E. White (Vice-Presidents); Messrs. E. C. Carr, C. E. Corfield, F. W. Crossley-Holland, H. Finnemore, Sir William Glyn-Jones, J. C. Jinks, A. R. Melhuish, H. Skinner; with Messrs. R. R. Bennett and C. H. Hampshire (secretarics).

OBITUARY.—Reference was made to the loss sustained by the Conference through the death of the following members: Mr. J. W. Cussons (Dorchester), Mr. E. W. T. Jones (Wolverhampton), Mr. J. P. Kay (Aberdeen). The secretaries were instructed to convey the condolences of the Executive Committee to the relatives of the late Mr. J. P. Kay, who was a Vice-President in 1885, when the Conference visited Aberdeen.

Nottingham Meeting.—Mr. E. C. Carr stated that the local arrangements for the annual meeting were well in hand, and that full details of the programme would be sent to every member of the Conference towards the end of the month. Members would be asked at the Mayoral reception whether they desired to participate in an excursion, which the local Committee proposed to arrange for Friday, July 28, as an extension to the official programme. Mr. Bennett stated that before the meeting that afternoon he had had an opportunity of discussing the programme with Mr. Carr. He proposed that a hearty vote of thanks be accorded to Mr. Carr and his colleagues in Nottingham, and this was carried unanimously.

Other Business.—A sub-committee, consisting of the President, the treasurer, Messrs. E. Saville Peck, H. Finnemore, and the secretaries, was elected to make a report to the Executive upon the nomination of officers for election at the forthcoming annual general meeting. Mr. Bennett read a letter from the President of the Bath Pharmaceutical Association stating that the Committee of the Bath Association appointed to deal with the suggested invitation to the British Pharmaceutical Conference to visit Bath in 1923 had decided definitely to confirm the invitation. The following fourteen persons were elected as members: Mr. W. J. Clay (Nottingham), Mr. H. C. Prince (Nottingham), Mr. A. E. Turner (Nottingham), Mr. C. J. Eastland (London), Mr. B. W. Melhuish (London), Mr. K. E. N. Williams (London), Mr. F. J. Dyer (London), Mr. E. Sage (London), Miss J. Boulter (Sheffield), Miss M. J. Glaister (Sheffield), Mr. D. Rich (Liverpool), Mr. G. W. Harris (Canterbury), Dr. P. C. Brett (London), Mr. R. H. Crichton (Banchory).

Scottish Pharmaceutical Federation

A MEETING of the Border branch was held at Galashiels on April 27. Mr. W. E. Wilson, Hawick (President), in the chair. The chairman doubted if government by Executive would be a success so far as the Federation is concerned unless country chemists could be given a genuine interest in the affairs of their branch. There cught to be two half-yearly meetings, for which the branches should receive agenda from the Executive. He had recently received an elaborate document on the reservation of certain lines to chemists. A covering letter requested him to read the document "so that the meeting on Wednesday can adopt it and recommend it to the branches." The writer seemed to think that reading a document and approving of it were synonymous. The meeting afterwards discussed matters relating to pricing and the confinement of certain lines to the drug-trade. Mr. Hendry (Galashiels) pointed out that the use of the terms "pint," "imperial pint," and "reputed pint" in the Glasgow price list led to a good deal of confusion.

Corner for Students

Conducted by Leonard Dobbin, Ph.D.

Communications should be addressed "Corner for Students, 'The Chemist and Druggist,' 42 Cannon Street, London, E.C. 4."

Report on the April Analytical Exercise

THE powder distributed to students on April 4 contained two parts by weight of lead tartrate, two parts of zinc hydroxycarbonate, and one part of magnesium phosphate. The calculated composition of such a mixture is:

Pb	 	 	 	23.3
Z_n	 	 	 	22.9
$Mg \dots$	 	 	 	2.2
$C_4H_1O_6$	 	 	 	16.7
CO_3	 	 	 	7.0
PO_4	 	 	 	5.8
OH	 	 	 	8.0
$_{\mathrm{H}_{2}\mathrm{O}}$	 	 	 	14.1
				100.0

The powder also contained, as impurities, calcium in small proportion and recognisable traces of iron, of ammonium, and of a chloride. Samples of the powder were distributed to fifty-five students, and twenty-seven reports were submitted for examination. The failures in the detection of the several main constituents were: (a) Metallic radicals: Lead, 2; zinc, 3; magnesium 9.
 (b) Acidic radicals: Tartaric, 6; carbonic, 5; phosphoric, No fewer than eighteen students failed to report the evolution of water when the powder was gently heated in a dry tube, although the quantity evolved was considerable.

While this was a distinctly more difficult example than several of the earlier exercises of the tournament series, it is gratifying to note that it was dealt with, by several correspondents, with almost complete success. Containing as it did both the phosphoric-acid radical and an organicacid radical, in conjunction with metals other than those of the alkali group, the analysis of the powder demanded the special modes of treatment involved in such cases, and when these were not employed mistakes were almost, if not quite, inevitable. Some mistakes also arose, however, in connection with matters which had no relation to these particular constituents. Probably the commonest of these, and one of the most fruitful sources of error (besides being one which is constantly the subject of comment in this column), was the failure, owing to the too considerable concentration of hydrochloric acid in the solution which was being treated with hydrogen sulphide, to secure the complete precipitation of the lead as sulphide. To ensure that this result shall be attained it is essential that the solution should be cold, that it should not contain more than a very small proportion of free acid, and that it should be thoroughly saturated with hydrogen sulphide. In the present analysis, of the numerous students who reported the separation of crystals of lead chloride in Group I., a considerable number also reported the failure of hydrogen sulphide to produce any precipitate in Group II. This failure was the plainest possible indication that too large a proportion of free acid was present in the solution, and it should have suggested ample dilution with water or the removal of part of the free acid by evaporation or otherwise; since, if lead chloride separates in Group I., some lead must be present in the filtrate, owing to the fact that lead chloride is not by any means wholly insoluble in water and dilute acids. Lead which had not been properly removed in Group II. by means of hydrogen sulphide of course found its way into the solutions undergoing examination for metals belonging to subsequent groups, and it was liable to cause confusion there. It is quite likely that most of the reports of the presence of aluminium were based upon reactions really due to lead.

The proportion of magnesium present was small, and this, no doubt, is the reason for most of the failures in its detection; but an imperfectly carried out phosphate

separation (or the omission to carry out any) may also have been responsible for some failures. It was reported in several instances that the addition of ferric chloride to the prepared acetate solution with a view to removing the phosphoric-acid radical did not produce any precipitate. This was not the experience in our own analysis, and was certainly incorrect. The quantity of ferric chloride actually required was undoubtedly small (corresponding to the small proportion of the phosphoric-acid radical present), but that some was being used up in the reaction before the red colour due to ferric acetate was established was too noticeable to be altogether overlooked in a careful analysis, and ought to have been recognised.

A few students met with difficulties consequent upon the omission to evaporate to dryness and ignite, in order to destroy organic matter, after the separation of the lead. The interference of the tartaric-acid radical is so likely to cause trouble in the search for metals that this ignition should not on any account be omitted, and failure to carry it out in the present analysis was a breach of

recognised needful analytical procedure.

In testing for acids one or two students met with difficulties, due to the presence of lead in small proportion in the sodium carbonate extract from the powder. This is a source of occasional error regarding which it is well to be on guard, since lead, copper, and antimony in particular may find their way into such a solution when the tartaric and some other acid radicals are present, and may there give rise to reactions which confuse or mislead.

The First Prize for the best analysis has been awarded

G. R. A. Short, 296 King's Road, Reading.

The Second Prize has been awarded to:

EMERIC ALFRED ECCLES, 9 Margaret Street, Oswaldtwistle.

First Prize.—Any scientific book that is published at a price not greatly exceeding fifteen shillings may be taken as a first prize.

-Any scientific book which is sold for Second Prize .about seven shillings and sixpence may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

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	Marks	-Awa	RDEI	FOR ANALYS	ES	
G. R. A.	Short	(1st		Aza		 74
Prize)			97	Sinigrin		 73
E. A. E	ccles	(2nd)		Pansy		 72
Prize)	•••	• • • •	96	Senecio Jaco	bæ	 71
Alphazo			94	Uranos		 70
Vicia			92	Hic Labor		 69
Pinus			88	Salol		 62
Cannabis I	ndica		87	Cedar		 58
Æsculapius			84	Squib		 54
Califigs			84	Musker		 45
Element			84	Mait		 39
Kudar			84	Câon		 32
Desmid			83	Sodium Chle	oride	 22
Perge			80	Palladwr		 7
Caglio			76			

To Correspondents

G. R. A. Short.—In analysing a phosphate mixture it is not safe to mix the filtrate from the precipitate produced by adding ammonium chloride and excess of ammonium hydroxide with the filtrate from the precipitated ferric phosphate and basic ferric acetate unless the first of these filtrates has been proved to be free from the phosphoric-acid radical (by adding magnesia mixture to a small portion of it). If the first of these filtrates contained—as it might—phosphoric-acid radical and the second contained barium-group metals or magnesium a precipitate of insoluble phosphate would appear on mixing them, and the special separation would have to be repeated. That this did not occur in the present instance was due to the fact that the first filtrate was free from the phosphoric-acid radical. Think over this

point for yourself.
E. A. Eccles.—Note very particularly that, in trying the flame test, a platinum wire moistened with hydrochloric acid must not on any account be dipped into the powder under examination, lest contamination of the latter should occur. A looped wire should be employed, a small portion of the powder, previously mixed with hydrochloric acid on a watch-glass, being used for examination. The precipitate produced in the "acetate" separation of a phosphate mixture contains both ferric phosphate and basic ferric acetate.

ALPHAZO.—See the general remarks regarding the presence of lead in the filtrate from the first group.

VICIA.—The precipitate in the second group, although small, should have been examined for other metals of the

group besides lead.

PINUS.—The faint trace of an ammonium compound which you reported was undoubtedly present, but it was almost uniformly overlooked. It is difficult to account for your failure to obtain a silver mirror in the test for a tartrate: various other correspondents reported a positive result from the test. In any future report, please number your slips and fasten them securely together in numerical order.

CANNABIS INDICA.—It is probable that the lead which was not separated in the second group caused trouble in connection with the phosphate separation. We were not able to confirm the presence of manganese, which you

reported as indicated by several tests.

ESCULAPIUS.—In reporting on the systematic examination, you omitted to mention how the original solution was obtained, and in describing the acetate separation you omitted to report the addition of ferric chloride. If you did not add the last-named reagent, the removal of the phosphoric-acid radical was, of course, not effected. The precipitate which you took for ferric benzoate probably consisted of ferric phosphate and hydroxide.

CALIFIGS, KUDAR, and OTHERS.—Since lead was not completely eliminated in Group 2, it is probable that the precipitate you attributed to aluminium was really due

to lead.

DESMID.—Various correspondents habitually ignore the evolution or non-evolution of water on heating a powder, but your definite statement that water was not evolved in the present instance is remarkable, in view of the

considerable proportion actually given off.

Perge.—In a quite successful "acetate" separation of the phosphoric-acid radical, the filtrate from the ferric phosphate is entirely free from iron, the slight excess added as chloride being eliminated, along with the phosphate, as basic acetate. Tests for manganese and for the citric-acid radical should have been applied. See the reply to "Alphazo."

CAGLIO.—Although you arrived at a correct result regarding the metallic radicals present, your analysis was faulty, inasmuch as you omitted to apply a special method for a phosphate mixture. On adding ammonium chloride and excess of ammonium hydroxide, as group reagents, a precipitate of ammonium magnesium phosphate should have appeared, especially in the cold. It is a mistake to endeavour to hasten the precipitation of this particular phosphate by heating, since it is more soluble in hot than in cold water.

Aza.—According to your report, you only tested for metallic radicals in the aqueous extract from a portion of the powder which had already been charred by heating in a test-tube. You give no account of any treatment of the insoluble part of the charred residue.

SINIGRIN.—The evolution of carbon dioxide when the powder was treated with a dilute acid was not inconspicuous, and ought not to have been overlooked.

Pansy and Senecio Jacobæ.—Read the last sentence of

the reply to "Æsculapius."

URANOS .- Note that heating with dilute sulphuric acid does not give rise to effervescence with oxalates and formates. It is the concentrated acid which decomposes these with gas evolution.

CEDAR.—Your preliminary examination was too limited in scope, and much more detail should have been given regarding the systematic analysis. Read also the first sentence of the reply to "Perge." SQUIB.—You should have separated the phosphoric-acid

radical before adding the group reagents for the zinc and

succeeding groups.

Musker.—Absence of traces of manganese from the lead peroxide used in testing for manganese should be proved by means of a blank test. Many samples contain such traces.

CAON.—In testing for a chloride, you must surely have added silver nitrate to a solution to which hydrochloric acid had previously been added. The trace of a chloride present in the powder was altogether insufficient to give rise to the heavy precipitate of silver chloride which you obtained.

Palladwr.—This exercise has been too difficult for your stage of proficiency in analysis, but time and persevering care will mend matters. You may profit by diligent attention to the points mentioned in the general remarks and in the replies to other correspondents.

THE ANALYTICAL TOURNAMENT

Another successful tournament concludes with the analysis reported upon in the foregoing. Like many of its predecessors, it has evoked a highly satisfactory amount of interest among students—an interest which has been well sustained to the close—while much good and some really excellent work has been done. From first to last the tournament has been taken part in by seventy-seven competitors, and of these no fewer than seventeen-an unusually large proportion—sent in reports upon all six of the analytical exercises. More than one promising and of the analytical exercises. More than one promising and successful competitor only entered after the tournament was well begun, or, for some reason, missed an intermediate exercise; several, faint-hearted, dropped out by the way and did not resume. The latter we specially deplore, and should greatly have preferred that dogged perseverance which, even if not immediately successful. will not give in.

The first place in the tournament has been taken by "Alphazo" (Mr. T. C. Robinson, 14 St. James's Road, Church, Lancs), with the very creditable aggregate of 545, made up of 98, 82, 81, 95, 97, and 94, and to him the first prize of books to the value of £3 3s. and a

certificate have been awarded.

The second prize of books to the value of £2 2s., with a certificate, has been awarded to "Desmid" (Mr. David Buckley, 4 Carlton Road, Godley, Hyde, Cheshire), whose aggregate is 516, made up of 83, 81, 84, 90, 95, and 83.

The third prize of books to the value of £1 1s., with a certificate, has been awarded to "Cannabis Indica (Mr. Eric Parker, 41 Gordon Street, Colne, Lancs), with an aggregate of 507, made up of 96, 66, 72, 90, 96,

and 87.

We congratulate these prize-winners on the successful results of their efforts, and request them to communicate at once with the publisher as to the books which they desire to have as prizes. To those who have not gained prizes this time we offer our thanks for their contributions towards making the competition a success, and suggest that they may try again, perhaps with a different result, on a future occasion

IT IS ANNOUNCED that the Drane collection of china (C. & D., II., 1921, p. 815) has been removed from Swansea to London, and will shortly be on view there.

A DIET FOR RICKETS.—Lecturing in London on May 4, Professor Mellanby commented on the fact that, once a natural product—e.g., milk—was interfered with, it lost some of its best properties. Rickets was much worse in Sheffield than in London. Both children and adults suffered. He gave children minced raw meat, potatoes, uncooked greens, milk, and cod-liver oil. The diet not only cured the rickets in children, but transformed their attitude towards life. Laboratory experiments justified themselves in this work in a way not previously done with regard to medicine. regard to medicine.

Chemical Society

AT the meeting of the Chemical Society, held at Burlington House, London, W., on May 4, Professor J. F. Thorpe, F.R.S., in the chair, mention was made that an address had been sealed in council by the Society and sent to the University of Padua, on the occasion of the 700th anniversary of the foundation of that seat of learning: the

text of the address was read.

Mr. F. V. Tideswell (with Mr. R. V. Theoler) read a paper on Dopplerite. Studies in the Composition of Coal. The author briefly referred to the various theories on the structure of coal, and then proceeded to deal with a jelly-like mass found some feet below the surface in peat layers. On drying, it yields a shining substance resembling glass, which is soluble in water and in alkalis. Under the microscope this substance presents no structure. It is also found in peat deposits in Ireland, and this was the substance investigated by the authors. This substance, known as dopplerite, probably results from the decomposition of vegetable matter. Owing to its colloidal nature it is difficult to examine, but the authors found it to consist of 74 per cent. of water, the residue containing about 60 per cent. of carbon. On distillation it yielded carbon monoxide and dioxide, and between 300° and 500° tar, consisting mostly of crossols. It was interesting to note that water continued to be given off until a temperature of 300° was reached. The authors expressed the opinion that dopplerite is probably the precursor of the vitrein in coal, and discussed the formation of the three components of coal.

Dr. F. L. Pyman (in collaboration with Mr. I. E. Balaban) presented a paper on Bromo-derivatives of Glyoxaline, embodying a study of orientation in the nucleus of this compound. The tautomerism which this eompound exhibits is due to the substitution of the available hydrogen atoms in the nucleus. On treatment with bromine all three hydrogen atoms are substituted, and on further treatment of the resulting tribromo-glyoxaline with a 20 per eent, sodium sulphite solution a mixture of mono-, di-, and tri-glyoxaline, and also bromoglyoxaline sulphonic acid, was obtained. The position of the various groups in these compounds was studied and the results

discussed.

The Properties of Ammonium Nitrate. Part IV.—The Reciprocal Salt-pair, NH₄NO₃+NaC1 ≥ NH₄C1+NaNO₃ formed the subject of the communication presented by Mr. E. P. Perman. The presence of water depresses the melting-point of ammonium nitrate, 0.1 per cent. depressing it by 1°. The author described a series of experiments, with the observations made, on the relative meltingpoint-i.e., when crystals separate, of various mixtures of ammonium salts in different combinations, and the results of a study of their eutectics. The paper was illustrated by numerous slides showing the curves of the various results observed in the course of these investiga-

Professor E. C. C. Baly (with Mr. H. M. Duncan) read a paper on *The Reactivity of Ammonia*. The authors measured the amount of ammonia which was decomposed on passing an electric current of given strength through a wire. It was found that the amount of decomposition depended on the velocity with which the gas was drawn through the flask containing the wire. If the gas was drawn through at a regular rate constant results were obtained, but on drawing the gas through at a faster rate less ammonia was decomposed. The authors explained this difference by calling attention to the two methods in use of preparing ammonia on a commercial scale (the gas for these experiments was obtained from cylinders). Absolutely dry ammonia, as obtained by evaporating liquefied ammonia, is inactive, but the presence of water vapour increases the amount of decomposition enormously. On drying ammonia containing a trace of water vapour it also becomes inactive, hence we have in ammonia two phases,

The second paper read by Professor E. C. C. Baly (in collaboration with Messrs. I. M. Heilbron and D. P. Hudson) dealt with Photocatalysis. Part II.—The Photosynthesis of Nitrogen Compounds from Nitrates and

Carbon Dioxide Experiments had shown that light of short wave-length acting on carbon dioxide in water led to the formation of formaldehyde. This observation suggested a new line of work, and experiments were undertaken to ascertain the action of light on carbon dioxide in the presence of potassium nitrate, the latter salt being selected in view of the fact that it is the chief source of nitrogen supply available to plants. It was found that the formaldehyde produced in the first place reacts immediately with the potassium nitrate, resulting in the formation of formhydrocyanic acid; this forms the basis of all the other products found in plants. If an excess of formaldehyde is produced—i.e., if the amount produced cannot all be taken up by the nitrates, then sugars are produced. All the successive reactions take place with great rapidity. Professor Baly then proceeded to discuss the decomposition of formic acid into carbon monoxide and water, a reaction which up to the present has never been reversed, and also the various methods known of producing formic acid. The active formaldehyde produced by the action of light differs essentially from the ordinary form of this compound, and the author dealt with the derivatives produced by this activated formalde-When this active formaldehyde polymerises, the only sugars which the investigators were able to obtain were lexoses. On the other hand, the condensation of three parts of formhydrocyanie acid with one part of formaldehyde led to the formation of a large number of compounds, including pyrrol and pyridin, both being actually found in solutions exposed to light for several months. The highly interesting observation was made that on exposing formaldehyde and formhydrocyanic aeid to light for twelve hours two alkaloids were always obtained, one of which possesses an odour of tobacco, while that of the other resembles burnt hair. All these various transformations take place very quickly. Pro-fessor Baly then mentioned that the condensation of one part of formaldehyde with two parts of formhydrocyanic acid yielded xanthine, and he had succeeded in obtaining experimentally glyoxaline, a step towards the formation of proteins, since from the former it is possible to produce substituted amino-acids. He then briefly outlined the successive stages by which the various bodies are produced in the plant, by the influence of light on carbon dioxide, water and potassium nitrate, and in conclusion stated that the plant is compelled to carry out these various transformations, whenever light acts on carbon dioxide, water, and nitrates in the presence of chlorophyll, the successive reactions taking place with great rapidity.

FILING COVERS

The convenience of having a filing cover for the preservation of the Retail Price List will be appreciated by all users of the list. The filing cover which we have had made specially for the purpose is of stout cardboard with cords, so that the list can be firmly held in the cover. We can supply these filing covers at 1s. each, post free. Postal order or stamps should accompany orders.



ETHICS IN EGYPT .- Several leading Egyptian pharmacists advocate a professional court, composed of representatives of the profession, empowered to inflict penalties for transgressions against the ethics of pharmacy. profession is at present passing through a critical stage, and there are no means of proceeding against those who ignore a standard of honour. Further, a court of this kind is required to deal with points of difference between owners and their staff.

Insurance Act Dispensing

A Record of matters concerning Chemists' interests in the National Health Insurance Acts.

Reports from Local Centres **ENGLAND**

Cambridgeshire .- At a meeting of the Insurance Committee on April 29 a resolution was passed expressing the opinion that the new rates of remuneration, which came into force on May 1, are inadequate.

Somerset.—At a meeting of the Insurance Committee, on April 29, the county analyst reported upon five mixtures submitted for examination, which had been dispensed with a sufficient degree of accuracy, the presence of tap-water in one instance, instead of distilled water, which was ordered, in no way impairing the medicinal properties of the mixture. In the case of two mixtures, while the analyst was of opinion that a high degree of accuracy was not attained, they might be accepted as fairly satisfactory. The attention of the chemists con-cerned had been drawn to the discrepancies, and no further action was taken.

west Midlands Joint (Pricing) Committee.—The statistics for the year 1921 show a further increase in statistics for the year 1921 show a further increase in the number of prescriptions dealt with during the year, there being approximately 40,000 more than for 1920. During 1821 seripts were priced on behalf of the Staffs, Wolverhampton and Dudley Joint Tuberculosis Committee (34,363), Coventry Public Medical Service (30,956), and West Bromwich Union (8,886). A statement of the cost of administration showed the following charge per 1000 soviets: 1917, 216, 28, 3d, 1918, £15, 11s, 1d; 1,000 scripts: 1917, £16 2s. 3d.; 1918, £15 11s. 1d.; 1919, £17 6s. 2.7d.; 1920, £19 8s. 3d.; 1921, £20 9s. 6d. The number of scripts and prescriptions priced during the last three years was as follows:

Value No. of £ s. d. accounts 3.395 13 1 7.592 3.465 0 0 7.690 Prescript. Scripts 72.395 13 1 95.465 0 0 94.129 11 6 1.916.615 2.193.159 1.990.224 2.338.609 2.018.413 2.378.538 ••• 7,946 1921 ...

Worcestershire.—At a meeting of the Insurance Committee on April 29, the chairman read the following letter from a Shipston-on-Stour chemist, protesting against the reduction in the remuneration paid for dispensing medi-

The Ministry seem to forget that the dispensing of medicines involves a certain amount of responsibility, and that, however much they may argue with themselves that the mere putting of a solution of salts in a bottle, adding a little tincture and filling up with water, can quite easily be done by an unqualified person, they should not forget to little tincture and filling up with water, can quite easily be done by an unqualified person, they should not forget to add the factors of business-making, family providing, ratepaying, and other matters which a common chemist and druggist has to undertake. They would stand in horror if the ordinary bricklayer was paid at the rate of 1s. 8d. per hour, and yet they ask the pharmacist to accept this amount, since any bottle of medicine, however simple, takes at least fifteen minutes to dispense. They ask how? Well, the bottle has to be washed first of all, which takes two minutes; the mixture has to be made, which nobody can do under eight minutes (conscientiously), it has to be corked (cork free) and labelled, which takes, with writing name and number, two minutes; then wrapped and sealed, and handed to customer or patient, which involves two minutes; and I defy anybody to do it in less, properly. So we shall be paid 5d. for fifteen minutes' work, that is 1s. 8d. per hour, and yet an ordinary bricklayer gets more. His work is skilled, I know, but he has not the same responsibility. He cannot be fined for only putting half a brick instead of a whole one, or not quite as much mortar between one brick and another. Now, gentlemen, you may see why I think this is a most improper and unjust abuse of Ministerial authority. Mind you, I think the common pharmacist will carry on, but then you must understand he is not educated like the members of the big Unions, and does not wish to strike. He claims to be professional, and therefore must behave as a professional gentleman. He must keep up the status of the Society to which he belongs. Yes, gentlemen, he will carry on, but the Ministry should remember an otd saying before they begin to smile—"Evcry dog has his day."

It was decided to pass on the letter to the Ministry of Health.

It was decided to pass on the letter to the Ministry of Health.

Association Affairs

London (S. W.),—At a meeting of the South-West London Chemists' Association on May 8, the President (Mr. E. A. Atkins) in the chair, Messrs. H. Skinner and Thos. Marns, candidates in the forthcoming election of the Council of the Pharmaceutical Society, outlined their respective policies. Mr. Skinner, who reviewed the Council of the Part of cil's work for the past six years, said that candidates for the Council were being challenged on educational matters. The main thing is a sound preliminary education, the purpose of the qualification being chiefly to protect the public. He emphasised the fact that the syllabus for the Qualifying examination is being thoroughly discussed at headquarters, and that the Educational Committee is doing headquarters, and that the Educational Committee is doing its work well. Pharmacy, in his opinion, is at a dead end, and each man should carve out his own path. When he was elected in 1916 he saw that the Council should be fully alive to the duties of the new situation. He spoke briefly of the 1868 Pharmacy Act, and told the meeting how he was appointed to the "Pharmaceutical Journal" Committee. He criticised the heavy expenditure on the Lournal and said his great aim was to get ture on the Journal, and said his great aim was to get the cost to correct proportions. He also commented briefly on the B.P. Codex. In concluding, he commended the work, during the past six years, of the Council, which had to day a high standard of efficiency. He would not be satisfied, however, until pharmacy takes its place in the National Health organisation. Mr. Marns said his reason for seeking election was so that suburban interests might be represented. He is a suburban pharmacist himself. The Preliminary examination is quite inadequate for present-day needs. He said he had a whole-hearted interest in education, and, if elected, would do what he could for the interests of the retail men.

London (W.).—In response to an invitation from A. & F. Fears, Ltd., the London (Western) Chemists' Association paid a visit to the Isleworth works on May 4. Members and their wives made the journey in two large charabanes provided by the hosts. They were courteously received by Mr. Robert Pears, and were then divided up into groups of twelve, to each of which a guide was assigned. The departments were then visited, and the various processes involved in the conversion of the raw materials into the finished transparent product were clearly explained. Much interest was taken in the ingenious machinery and the many automatic and other labour-saving devices. In the older part of the works many of the side-lines are put up, and here Mr. Pears briefly touched upon the romance of his house. The whole party then assembled in the spacious canteen, where tea was

Manchester.—At a Council meeting of the Manchester Pharmaceutical Association held on May 4 the following officers for the year were appointed: President, Mr. E. H. Simmons; Vice-Presidents, Mr. T. E. Eastwood, Mr. D. Dickson; Treasurer, Mr. A. J. Pidd; Secretary, Mr. T. Miller.

Scarborough.-A meeting of the Scarborough Pharmacy Club was held on May 1, the President (Mr. H. R. Allanson) in the chair. Mr. E. R. Cross will represent the Club at the British Pharmaceutical Conference at Nottingham. It was decided to support Mr. Greenfield's candidature in the forthcoming Council election. Hirst, the Club's botanist, reported that he had secured several plants for their garden at Ashburn. The President then gave a short address on Window Dressing. All seasonal goods, he said, should have a plain, clean, and clearly priced showcard. Mirrors at the back of windows are a nuisance; side mirrors may be admitted in special circumstances. He gave details of the amount of attraction caused by coloured lighting effects. As a useful book for the window-dresser The Chemist and Druggist "Chemists' Windows" was mentioned. He pointed out how one must dress a window to suit the intelligence of the passer-by. Afterwards a discussion took place on buying goods on "window bonus" terms, and it was decided that it did not pay in busy thoroughfares, and that where the windows are more valuable better terms should be allowed.

Thames Valley.-The Thames Valley Pharmacists' Association, on May 10, visited the soap-works of A. & F. Pears, Ltd., at Isleworth, and after nearly two hours sight-sceing the party was entertained to tea, and Mr. Booth invited the company to call and see the offices in New Oxford Street, London, when he would show them the clerical side of the business. Mr. Goode Mr. Goode (secretary) said he had received a challenge from Pears' Athletic Club to play them at bowls, and he hoped the members would support him in getting a team together.

Women Pharmacists .- The annual meeting of the London Group, National Association of Women Pharma-eists, was held on April 26, Miss Andrews (President) in the chair. In moving the annual report, the chairman drew attention to the increase in the membership of the group, and to the gratifying results which had followed the advertisements in the Press stating that their employment bureau could supply experienced pharmacists and dispensers for doctors, hospitals, or retail work. appointment of the following officers for 1922-23 was announced: President, Miss E. K. Hughes; Vice-President Miss A. R. Hughes; Vice-Presiden dent, Miss Andrews; Secretary, Mrs. Irvine; Employment Secretary, Miss Andrews; Treasurer, Miss Sproule.

Miss E. K. Hughes proposed a vote of thanks to the retiring President. Miss Andrews. The following Association of Women Pharmacists: The President, secretary, and Mrs. Freke, Misses Andrews, Boyes, Braithwaite, Burton, Borrowman, Bristowe, Claremont, Cross, Edmond, Fordyce, Goodwin, Hooper, Hodgkinson, Jacobs, Jepson, King, Sproule.

Personalities

MR. W. H. LENTON, Ph.C., Hunstanton, was installed, on May 8, as Worshipful Master of the le Strange Lodge, No. 3730.

WE regret to learn that Mr. W. L. Currie, ex-President of the Pharmaceutical Society of Great Britain, is seriously ill.

MR. L. P. MANTLE, who represents Kolynos dentifrice in the Midlands, has removed to 110 Lansdowne Road, West Didsbury, Manchester.

COUNCILLOR A. HUMPHREYS, managing director of Bleasdale, Ltd., wholesale druggists, York, recently enter-



MR. A. HUMPHREYS

vears' connection with the business. Mr. Huniphreys joined the staff of Clarke, Bleasdale, Bell & Co. as town traveller, and a few years later succeeded to the position of the late Mr. William Bleasdale. In 1894 the firm was converted into a limited company, with Mr. Humphreys as its secretary; and in 1896 he followed Mr. G. A. Grierson as managing The function director. referred to was entirely successful, including The gatherand a dance.

tained his fellow-directors and the staff of the

company to supper in celebration of his forty

concert, a whist-drive, and ing numbered about 120. ing numbered about 120. In the course of the proceedings a presentation of a silver tray was made to Mr. Humphreys, on behalf of the directors, by Mr. T. C. Atkinson; and Mr. J. Lowther, on behalf of the staff, presented him with a pair of silver Corinthian candlesticks. Mr. Humphreys, in the course of an interesting speech of acknowledgment, referred to the profit-sharing scheme that has been in force for several years.

Mr. A. H. Hale, F.S.M.C., D.B.O.A., chemist and druggist, has been appointed to the examining body of the Faculty of Medicine at Chulalongkorn University, Bangkok.

MR. W. A. Ellis, for many years chief controller at Bristol on the staff of the Great Western Railway, has been appointed assistant divisional superintendent of the company at Gloucester. Mr. Ellis is the brother of Mr. F. R. Ellis, F.C.S., M.P.S., Charlwood Street, London, S.W. 1, a well-known Metropolitan pharmacist.

Among those connected with pharmacy who attended the conference of Rotary Clubs, held at Brighton, recently, were Messrs. J. J. Forbes, Perth; A. Mortimer, Harrogate; Thomas Stephenson, Ph.C., Edinburgh; George Whitfield, Ph.C., and Mrs. Whitfield, Scarbard School Computer Science (1988).

Writing to "The Times" of May 9, Dr. G. Claridge Druce, Oxford, gives an instance of the restorative effect of modified sunlight on a darkened oil painting. In 1907 a picture painted in 1583 came into Dr. Druce's possession; it was so blackened by age that the identity of the central figure, St. Jerome, was almost a matter of surmise. Since it has been hung in a room with a good morning light the varnish has gradually become paler, "and now," writes Dr. Druce, "all the details of the lion, the cardinal's hat, the skull, and crucifix are plainly seen, and the colours of the flesh and sky have become quite bright.

Mr. Edward Harry Simmons, the newly elected President of the Manchester Pharmaceutical Association, was

born at Spilsby, Lincolnshire, and, after being educated at the local grammar school, served a five years' apprenticeship to a firm of surgeens in the town. He gained further experience with Mr. A. H. Ellithorne, chemist and druggist, Birkenhead, and studied under Mr. R. C. Cowley, Ph.C., at the Liverpool School of Pharmacy, qualifying in 1896. For the next few years he was successively assistant with the late Mr. James Botham, Ph.C., Higher Broughton, senior assis-



Photo. J Loteworth. Mr. E. H. Simmons

tant dispenser at Crump-sall Workhouse Infirmary, and chief dispenser at the Manchester Children's Hospital. In 1905 Mr. Simmons joined the late Mr. G. S. Butcher, chemist and druggist, 329 Chapel Street, Salford, as partner; three years later became the sele mornister of this old-established business. he became the sole proprietor of this old-established business, which he has continued under the style of Butcher & Simmons. Mr. Simmons was one of the founders of the Salford and District Pharmacists' Association, and has served a term of office as its President. As the result of a paper on co-operative buying contributed by him a buying association was established in the borough, and performed its functions successfully until the outbreak of war. Mr. Simmons has represented Salford at all recent London conferences on Insurance matters. He became the first secretary of the Salford Pharmaceutical Committee-a position he has held ever since-and has represented pharmacy on the Pharmaceutical Service and Joint Services Sub-Committees since their formation. token of regard the Salford pharmacists presented him some years ago with a picce of plate. The Manchester Pharmaceutical Association, of which he has been a member for some years, co-opted him to its council to fill the vacancy caused by Mr. G. A. Mallinson's removal to London. Mr. Simmons was elected Vice-President of the Manchester Association last year, and is also on the committee of the local branch of the Retail Pharmacists' Union. He is the first Salford chemist to occupy his new position, and will make an excellent President.

Birth

McLoughlin.—At 157 Oldpark Road, Belfast, on May 3, the wife of S. McLoughlin, Ph.C., of a daughter.

Marriages

BILLINGTON—Fox.—At St. John's Church, Barnsley, on April 27, by the Rev. R. Huggard, M.A., vicar, assisted by the Rev. W. Hirst, brother-in-law of the bridegroom, William Billington, chemist and druggist, third son of Mr. H. B. Billington, chemist and druggist, to Edith, elder daughter of Mr. F. J. Fox.

BUSBY—JACKSON.—At Belmont Presbyterian Church, Belfast, on April 26, by the Rev. James Dewar, George Bell Busby, Ph.C., third son of the late Mr. William Busby, 51 Atlantie Avenue, to May, only daughter of Mr. Thomas Jackson, 155 University Street.

NOLAN—VICKERY.—At St. Finbarr's South R.C. Church, Cork, on April 27, by the Rev. E. Fitz-Gerald, assisted by the Rev. T. Nunan, with nuptial mass, William Joseph Nolan, M.P.S.I., the Rexall Pharmacies, Dungarvan and Kilmacthomas, co. Waterford, to Victoria Adelaide (Vic), eldest daughter of Mr. T. Vickery, Henry Street, Kenmare, co. Kerry.

ROBINSON—DRENNAN.—At St. Mary's Parish Church, Comber, on April 13, by the Rev. J. A. Houston, M.A., William Robinson, Ph.C., Ramelton, co. Donegal, to Henrietta, third daughter of Mr. David Drennan, Comber.

Deaths

Boulger.—At Laucaster Park, Richmond, Surrey, on May 4, Mr. George Simonds Boulger, F.L.S., professor of botany and geology at the City of London College, aged sixty-nine. Professor Boulger was the author of "Familiar Trees" and other widely known books on botanical subjects, and edited recent editions of Johns's "Flowers of the Field."

Hewey.—On May 3, Mr. Arthur Ernest Hewey, aged fifty-one. Mr. Hewey was manager to J. B. Hay & Co., druggists' sundriesmen, 47 Rupert Street, London, W. 1, for over twenty-six years.

Margerison.—In a London nursing home, recently, Alderman William McKune Margerison (Joshua Margeri-



MR. W. McK. MARGERISON

son & Co., soap manufacturers, Leighton Street, Preston). Alderman Margerison was fourth son of the late Mr. Joshua Margerison, who established the manufacturing known business in 1871. At the age of fourteen he became associated with his father's firm, and in the course of the next fcw years he took many prizes in science subjects at Preston. His municipal career commenced 1894; ten years later he was appointed an alderman and a justice of the peace, and was elected Mayor of Preston. He served a second term of

office as Mayor in 1909-10, and was for a long period active in promoting the public health of the borough.

Morgan.—At his residence, 22 Harrington Gardens, South Kensington, London, S.W. 7, on May 9, after a long illness, Mr. Edward Vaughan Morgan, youngest and last survivor of the seven Morgan Brothers, founders of The Chemist and Druggist, aged eighty-three.

Jones.—At the residence of his father (Mr. John Jones, chemist and druggist, Swinton, Rotherham), on May 6, of pneumonia, Mr. Daniel Thomas Jones, chemist and druggist, 94 High Street, Mexborough, aged forty-three. Mr. Jones was trained in pharmacy by his father, and was for some years in partnership at Mexborough with his brother, who also died of pneumonia. He belonged to the Rockingham and the St. Nicholas Masonie Lodges, and was greatly esteemed. He leaves a widow.

Patterson.—At Dayton, Ohio, U.S.A., on May 7, Mr. John Henry Patterson, head of the National Cash Register

Companies, aged seventyseven. Mr. Patterson, together with his brother, founded the National Cash Register business in 1884, and made the perfeeting of cash registers his life study. A great organiser and advertiser, he lived to see his companies extend to every country in the civilised world. He was one of the first manufacturers institute schools for salesmen and for the technical education of workers. Industrial hygiene, profitsharing, attractive surroundings for employment, and lectures illustrated by cinema films



MR. J. H. PATTERSON

were among other striking features of his method. Mr. Patterson, who frequently visited this country, was well known as a philanthropist and an advocate of improved eonditions of life: in 1918 he presented 264 acres of his estate at Dayton to the public for the purposes of a park and playground. He is survived by a son (Mr. F. B. Patterson, President since August 1921 of the National Cash Register Co.) and a daughter.

Savege.—On May 4, suddenly, Mr. Ernest Savege, chemist and druggist, 10 Royston Parade, Penge, London, S.E. 20, aged sixty. Prior to going into business at Penge, Mr. Savege was for some time in Bombay and Madras. He leaves a widow and a son.

Wright,—At Burnley, recently, the wife of Mr. J. W. Wright, chemist and druggist, 141 St. James's Street, aged sixty-eight.

Wills

Mr. Arthur Wilson Ball, 37 Tufnell Park Road. Tufnell Park, London, N., joint managing director of Oppenheimer Son & Co., Ltd., who died on February 1 intestate, left estate of the gross value of £2,139 5s. 4d., of which £1,252 9s. is net personalty.

MR. HENRY HALSTEAD, chemist and druggist, 20 and 22 Bank Street, Rawtenstall, who died on October 13, left estate of the gross value of £2,446 15s. 8d., with net personalty £2,239 16s. 11d. Probate of his will has been granted to his children, Viva Halstead and Halsey Clegg Halstead, chemist, both of Bank Street, Rawtenstall.

Mr. William Herbert Woods, Ph.C., 10 St. Lawrence Road, Plymouth, who died on August 25, left £8,273 15s. 4d., with net personalty £6,200 13s. He gives £50 to his wife, £10 each to the executors, £30 to John F. Blackmere if still in his employ, and the residue in trust for his wife during widowhood, and then for his children.

The annual report for the year 1921 of Mr. Arthur Judge, chemist and druggist, dispenser to the Derby Board of Guardians, states that the number of items dispensed was approximately 23,000 at a cost of £509, as against 19,224 costing £415 in the previous year.

Trade Notes

CRISOPAL.-W. E. Bingham & Co., Shudehill, Manchester, introduce Crisopal, a new hair-cream made with an eau de Cologne basis.

SAFETY-RAZOR BLADES .- John Watts, Lambert Works, Sheffield, offers safety-razor blades, made in Sheffield, to retail at 3s. 6d. per dozen.

Bristow's Georgian soap, a speciality of T. F. Bristow Co., Ltd., St. James's Walk, Clerkenwell, London, E.C. 1, is advertised in this issue.

Sponge-Cleaning.—Lagoon "Sponge Life" for cleaning sponges is a line advertised in this issue by the Buxton Hot-Spring Salts Co., 4 Cavendish Circus, Buxton.

DEVONSHIRE FRUIT PASTILLES .- A special offer in connection with Devonshire fruit pastilles is made in our advertisement pages by Ernest Jackson & Co., Ltd., Crediton.

SISTER LAURAS FOOD .- The sole selling agency in England and Wales for Sister Lauras Food has been taken up by Mr. Thomas Pugh, 67 Stafford Street, Birmingham.

HINKSMAN'S ASTHMA REMEDIES are obtainable from Hinksman & Forrest, Ltd., High Street, Carluke, and from wholesale houses. The terms are stated in the company's advertisement.

"Swandown" offers.—Further details are given in the advertisement of Henry C. Quelch & Co., 4 and 5 Ludgate Square, London, E.C. 4, regarding three special orders for Tetlow's "Swandown."

SPRAZONE OUTFIT. - The United Laboratories and Chemical Co., Ltd., 97 Queen Victoria Street, London, E.C. 4, offer for 4s. 9d. to send an "Ideal Reform" Sprazone outfit on approval for ten days.

IALINE PREPARATIONS.—Burt, Boulton & Haywood, Ltd., Salisbury House, London Wall, London, E.C. 2, offer literature and showcards to assist the sale of Ialinc preparations for agriculture and horticulture.

LAVENDER MOTH TABLETS are a good selling line at this season when woollens and furs are put in store. The makers of the tablets are H. & T. Kirby & Co., Ltd., Newman House, Willesden Green, London, N.W. 2.

Marshall's Lysol.—An announcement is made by Lysol, Ltd., Raynes Park, London, S.W. 20, that in future the sales of Marshall's lysol, osyl, and other lysol products will be conducted direct from the offices at Raynes Park.

Pears' transparent coal-tar soap is the newest line made by A. & F. Pears, Ltd., 71-75 New Oxford Street, London, W.C. 1. The soap is in large, transparent, round tablets, and is packed three tablets in a box. The tablets retail at 1's, each.

Duogen is the brand name of liq. hydrogen peroxide (10 vols.) made by The British Drug Houses, Ltd., Graham Street, City Road, London, N. 1. It is packed in bottles containing 4, 8, and 16 fluid ounces, retailing at the protected prices 1s. 4d., 2s. 3d., and 4s.

"MONTSERRAT."—The announcement in this number of Evans Sons Lescher & Webb, Ltd., refers to a new poster and window-display competition in connection with the "Montserrat" lime-juice cordial. Details are given of the prizes, and in addition 7s. 6d. is paid for photographs of window displays. "Montserrat" Health Salt of the same series has the distinctive lime flavour and is free from

REVLOC PREPARATIONS.—We have had an opportunity of examining the Revloc products advertised in this issue by E. & G. H. Colver, manufacturing chemists, 23 Ryland Road, Edgbaston, Birmingham. The lemonade crystals and health salt are packed in very attractive lever-top The health salt is a dry powder which effervesces freely in water. Other specialities are boracic foot socks, Colvers' seabreeze foot-bath salts, solidified toilet paraffin, and bismuthated magnesia. We have also inspected the advertising matter supplied for promoting sales, for which purpose it should be very effective.

"Bubbles," the house-organ of A. & F. Pears, Ltd., continues, in the number that has just reached us (Vol. II., No. 5), to appeal to a wider circle than the one for which it is primarily issued. "My First Order," by Mr. W. Edwards Booth, is a fascinating narrative comprising, incidentally, a compendium of selling-points; and a longer article by the Hon. W. Hulme Lever on "The Uses of Advertising" is full of valuable hints for the discerning reader. A biographical sketch of the late Mr. E. V. Salaman is accompanied by an excellent portrait. Lord Leverhulme and other well-known contributors have wise things to say; and we must not omit mention of an "Ode to Spring—and all that," a brilliant metrical rhapsody in the language of "old beans."

TABLOID BENZOIC ACID (EUCAINE) COMPOUND.—Under this title a product has been introduced by Burroughs Welleome & Co., with a formula similar to the well-known tabloid benzoic acid compound which has been supplied for many years, except that eucaine hydrochloride replaces the cocaine hydrochloride of the older preparation. The other ingredients are benzoic acid, codeine, menthol, ipecacuanha, oil of peppermint, and red gum. By the variation in formula a product is provided which is outside the scope of the Dangerous Drugs Act, and yet retains the valuable stimulant, expectorant, and anodyne properties of the original tabloid benzoic acid compound. Tabloid benzoic acid (eucaine) compound is issued in bottles of twenty-five and a hundred.

Trade-marks Applied for

The figures in parentheses refer to the classes in which the marks are grouped, for a list of which, with particulars as to registration, see "The Chemist and Druggist Diary" 1922. p. 277.

(From "The Trade-marks Journal," May 3, 1922.)

(From "The Trade-marks Journal," May 3, 1922.)

"MATTAMAC"; for chemicals (1). By Pearson Brothers, 45 Conduit Street, London, W. 1. 422,615. (Associated.)

"HELTHENE" on label device; for chemicals (2). By E. J. Allcoat, 70 Derby Street, Burton-on-Trent. 421,459.

"FROMINT"; for an indigestion medicine (3). By W. H. Hollamby, Park Villa, Alexandra Road, Heathfield, Sussex. 413,730.

"JAYNEX"; for a remedy for diseases of the respiratory organs (3). By Dr. D. Jayne & Son, 242 Chestnut Street, Philadelphia, U.S.A. 418,917.

"CRYSTOLATUM"; for medicinal chemicals (3). By Sterns, Ltd., 16 Finsbury Square, London, E.C. 2. 422,393. (Associated.)

Ltd., 16 Finsbury Square, London, E.C. Z. 42Z,090. (Associated.)
"MAGNOLAX"; for medicinal chemicals (3). By H. K. Wampole & Co., Ltd., corner of Herriott and Sherbrooke Streets, Perth, Ontario, Canada. 422,457.
"SUPRAGLANDOL BRAND A PHARMACEUTICAL PRODUCT"; for a pharmaceutical product (3). By the Hoffmann-La Roche Chemical Works, Ltd., 7 and 8 Idol Lane, London, E.C. 3. 422,512. (Associated.)
"SURGAID"; for all goods (3) and (11). By Cuxson Brothers, Ltd., 4 and 5 Livery Street, Birmingham. 423,224/099. (Associated.)

(Associated.)

Information Department INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated: M/105. Chologen (London | P/24. Nital

Chologen (London P/24. Nital noth" "Anti-Pro" tooth-paste (London agency) R/65. "Evercrease" w/115. "Anti-Pro" tooth-

INFORMATION SUPPLIED

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, The CHEMIST AND DRUGGIST 42 Cannon Street, London, E.C. 4.

CHEMIST AND DRUGGIST 42 Cannot Bismag, T/95
"Boncilla" perfumery preparations, L/85
Carbon tetraehloride, M/85
"Dandistole," G/95
Dr. Tucker's asthma cure, D/45
Himrod's asthma cure, A/85
Lantern slides for advertising purposes, W/65

street, London, E.C. 4.
Leichner's grease paints, B/35
"Pumilave" Soap, S/244
"Ramornie" meat extract,
M/65
"Rexall" specialities, M/65
Soda ash (for export), L/65
Thomas's Fett Powder, M/85
Water distillation and filtration
plant, H/194

Observations and Reflections

By Xr'.yser II.

The Annual Report

of the Council of the Pharmaceutical Society, even in your summary, covers too much ground for detailed criticism here, but two or three of its more salient points call for notice. The year was, as the report says, abnormal in many respects, and this fact makes its financial record of little permanent significance. The same can hardly be said of the numerical strength of the Society in membership, though in this respect, too, the conditions were abnormal. It is surely of more than passing interest that while the number of chemists and druggists on the Register increased by 925 (net), there were only 151 net additions to membership of the Society. This is the more remarkable in view of what the Society claims to have done to facilitate qualification. How is the discrepancy in numbers to be explained? The record of examinations shows a lamentable number of failures as regards the Qualifying examination (very little more than a third of the candidates succeeded in passing), and the usual indifference to the Major—seventyone candidates, thirty-nine passes. The inference is plainly that the former will not bear further stiffening, and that the latter should be either reformed or given up. There is a curious sentence in the report of the administration of the War Auxiliary Benevolent Fund. We are told that claims on the Fund are likely to be continued for some time, and will have to be met by drafts on the capital. Is not that precisely what the capital is for? Surely we cannot be meant to understand that up to the What is said of education is disquieting. It is evident that the "necessary revisions" of the Qualifying examination are meant to be in the direction—not of practical utility, but of science as taught in our universities.

The Withdrawal

of two prospective candidates (one of them after nomination) robs the Council election of much of the interest it would otherwise have had, and makes the result almost a foregone conclusion. I cannot, however, agree with the official view that there is just now no "dominant issue" before us, or that, as regards what I consider the dominant issue, there is no "wide cleavage of opinion as to the policy of the Council." Unless I am greatly mistaken, we are faced by a very serious "issue" indeed, and one which, if it develops as the Council seem to intend, will make a very wide cleavage in our ranks. What the issue is may be seen in the fact that, with one possible exception, every candidate who has placed his views before us lays stress on education as a matter of urgent importance. Many of them are very vague in their references to it, but there is a party in the Council, which will receive very strong accessions as the result of this election, bent, in spite of specious professions to the contrary, upon such changes in the examinations as will make qualification much more difficult than it is at present. Now the strength of any movement consists not so much in the number of those who favour it as in the resolution and driving force of those who inspire it. That the drivers in this case are consciously insincere in their professions it would be unjust to suppose, but they have some tincture of the self-deception of the fanatic; they do not see whither their course is leading them, or that they are gathering momentum as they proceed. cleavage will come when their design is matured, for if there is one thing certain in the political situation it is that the majority of the trade are strongly opposed to any changes that will make it more difficult for assistants to get qualified and at the same time tend to increase the number of unqualified dealers.

Mr. Parry's Sensitiveness

to criticism does not prevent him from hurling bitter words against those who do not agree with him. I see that he regards Mr. Wiggin's letters on the administration of the War Auxiliary Benevolent

Fund as "a clumsy political move, encouraged by the opposition Press, and directed against" himself "as a Council candidate." I do not know any "opposition Press," and at any rate he cannot accuse me of being instigated by such motives, since my criticisms were made something like twelve months ago. It is true I have taken the opportunity of this election to ask for an explanation of the phrase "conserving the Fund for pharmacy," and if any justification of such a very usual course is necessary it is furnished by the fact that the election has drawn from Mr. Parry the explanation hitherto withheld. The explanation he gives is satisfactory; but why was it not given before? Mr. Parry is his own enemy in the autocratic attitude he assumes, and has only himself to thank if he is misunderstood. I have nothing to do with the quarrel between him and Mr. Wiggin, but the action of the East Anglian Federa-"opposition Press"?) is obviously a matter for public comment. The reason why specific cases of parsimony were not supplied may be that the secrecy adopted by Mr. Parry's committee is as desirable in the case of those who have not benefited by the Fund as in that of those who have. Let us hope that the intervention of the Federation will have the effect of clearing the air, even if it does nothing else; as Manchester also is moving in the matter, the "something else" may be something considerable.

Plane-trees

it scems, are no longer to be encouraged in London, because they are said to bring on hay fever in those liable to that complaint, and also because they are "dreary and monotonous when met with in numbers." There is some injustice in thus libelling a tree that is commonly lopped, as are limes and other trees, into an unnatural shape. If allowed to grow naturally, the plane is one of the most graceful of trees, and was formerly held in high esteem for its beauty and the shade it affords. It was a great favourite with the ancient Greeks, who dedicated it to Helen, and the school of Plato used to meet under it. Pliny says that in his day those who would shelter themselves under its shadow had to pay custom for the privilege, and that to make it flourish in perfection it was "watered" with wine, with much more in its praise. It had, too, quite a respectable place in medicine. It was held good against venom, for toothache, as an application to sore eyes, and for burns. It flourishes better than most trees in our London streets, and its disappearance, "monotonous" as we make it, would be a matter for regret. Flourishing in a London square, it inspired Clough with one of his most beautiful lyrics.

In a Note on Ampoules

written in October 1915, I referred to La Sainte Ampouls, the miraculous vessel containing the oil used for anointing the kings of France. legend is that this vessel, already containing the holy oil, was brought down from heaven by a dove white as snow at the consecration of King Clovis in 496. Nor did the miracle end here. The oil, we are assured, did not diminish with time and use, though it would appear to shrink in bulk during the serious illness of any reigning king. The legend is first mentioned by Hinemar, Archbishop of Reims (born 806, died 882). The ampulla, which was preserved at the shrine of the saint in St. Remy, Reims, is described as having been of glass, in the shape of a vial, 41 millimetres high, with an aperture 16 millimetres in circumference. It was destroyed in 1793 by Rull, a member of the Convention, Commissioner in the Department of the Marne, but before delivering it to him the Curé of St. Remy, Abbé Seraine, took out of it a portion of the oil, which was kept in a crystal vessel enclosed in a silver-gilt shrine, and was used, for the last time, at the coronation of Charles X. in 1825. Henry IV., Napoleon, and Louis XVIII., who were not crowned at Reims, are, it is said, the only French monarchs since Philip Augustus (1179) who were not anointed with its oil.

"SANITAS" EMBROCATION

SHOULD BE STOCKED BY ALL CHEMISTS.

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CHEMISTS' WINES.

Jas. Burrough Ltd. D.1 Cale Distillery, Hutton Rd., LAMBETH, S.E. 11.

M. NAEF & Cie (Late CHUIT, NAEF & Cie) GENEVA Synthetic & Aromatic CHEMICALS OF EXCEPTIONAL QUALITY SPECIALITIES: Bouvardia Rose (various) Cyclosia Jasminia A Dianthine Lilaffeur Muguet Narcissus Violet (various) SOLE AGENTS— P. SAMUELSON & CO. 27 Mincing Lane, London, E.C.3 Who are also direct importers of MUSK, CIVET, and all ESSENTIAL OILS Telephone: Minories 1660. Telegrams: "Moschus, Fen, London." Index Folio 620

FIRST AND STILL THE BEST

STOPS LEAKS AND LOSSES

THE McCaskey Register Co., Watford

REYNOLDS & BRANSON, LTD.

Grand Prix

LEEDS.

Turin, 1911.

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Editorial Articles

The Merchandise Marks Bill

WE published recently (C. & D., April 15, p. 56) references to the Merchandise Marks Act, 1887, and explained the manner in which this Act affects and restricts the marking of imported goods for identification and other purposes. A Bill designed to widen the scope of this measure for preventing imported goods being mistaken for British products has now been introduced in the

House of Lords, and was read a second time on May 3. The Bill is designed to give effect to the recommendations of the Mcrchandise Marks Committee appointed in October 1919, whose report was summarised in the C. & D., July 3, 1920. The Bill is divided into four parts as follows: (1) Merchandise marks; (2) Government marks; (3) Royal arms, devices, and titles; and (4) general. Part I. deals with imported goods, and appears to go a lot further than the 1887 Act. The Board of Trade has power after making inquiry to issue an order requiring an indication of origin to be given in all cases where a false impression as to their origin is likely to arise by reason of their form, style, finish, etc. The 1887 Act allows the importation without any such marks of goods that were obviously imitations of well-known British lines. and so deceived purchasers. Such goods in future, where the Board of Trade have made the necessary order, will have to be plainly marked with the place of origin, an improvement on the previous legislation, the spirit of which is often violated. Goods brought here for reexportation are exempted from any order the Board of Trade may make. It is provided that trade bodies shall be allowed to apply to the Board of Trade for an order to be made relating to imported goods, and the Board will forthwith make the necessary inquiries. When this Department propose to take into consideration the question of making an order they must publish notice of their intention, and no order can be made until the expiration of three months from the date of publication of such notice. All persons affected will be afforded an opportunity of being represented at the inquiry. Each order made by the Board will specify the form and character of the indication to be applied to imported goods, and whether it is to be given at the time of importation or not, and any further provisions to safeguard purchasers from mistaking them for British goods. Goods imported before the date on which an order has been made providing for their marking in a manner indicating their origin are not affected by such order. Any person having any rights in a mark containing a prohibited device which has been used by him before the introduction of the Bill (April 10, 1922) is entitled to continue its use. One month must elapse after an order has been made before it can be enforced, and it must be published in the usual official journals. The importation of goods which offend against any of the following clauses is prohibited:

(a) Goods to which there is applied a forged trade-mark false trade description, or to which a trade-mark is

or false trade description, or to which a trade-mark is falsely applied within the meaning of the Act.

(b) All goods made or produced outside the United Kingdom which bear any name or trade-mark being, or purporting to be, a name or trade-mark of any manufacturer, dealer, or trader in the United Kingdom, unless accompanied by an indication of origin.

(c) Any goods in the case of which an indication of origin has been ordered under the Act, unless such is given.

(d) Any goods to or in connection with which a national

(d) Any goods to or in connection with which a national or other public device is applied in contravention of the provisions of an order under the Act, unless the device is accompanied by an indication of origin.

Any marks of identification of origin which have been ordered by the Board must not be altered or obliterated after importation. Part III. of the Bill makes it an offence to copy certain Government markings on such goods as hempen cordage, canvas, bunting, etc., and deals with the unauthorised use of Royal arms, devices, and titles; and Part IV. treats of the exercise of the powers of the Board of Trade under the Act, and specifies that a name which is identical with, or a colourable imitation of, the name of a place or district in the United Kingdom shall be deemed for the purpose of the Act to be the name of a place or district within the United

Kingdom. Four clauses in the 1887 Act are repealed, but they are all re-enacted in much wider terms in the new Bill. This fresh attempt to put a stop to foreign goods being placed on the home market in imitation of British products is designed to give better protection to British makers and the public. The manufacturer is given an opportunity to bring to the Board of Trade's notice any instances of foreign-made products which are likely to be mistaken for goods which he is producing here and which are well known as being home-made goods. This may be implied by either the similarity of make-up and finish or an imitation of a known and recognised trade-mark of British goods. The public should have no trouble in distinguishing British from foreign goods when once the Board have made an order for the origin to be clearly marked upon the article. In all cases in which an indication of origin is ordered it must be given by means of a conspicuous mark of a permanent character applied to the goods themselves, and must otherwise be such as adequately fulfils the object of the Bill. The only point which seems rather doubtful is the unlimited power which this legislation, if it becomes law, will give to the Board of Trade. Recent experience has shown that it is not wise to leave matters affecting commerce entirely in the hands of a Government Department. Something in the form of a Trade Committee to advise the Board should be provided for, and would possibly prove beneficial, applying technical knowledge to the making of orders. Such a committee would also be a safeguard for importers against harsh treatment.

Platinum and Palladium

DURING the last few months the market for platinum has been the subject of renewed interest, and there was a temporary sharp spell of firmness, although at the moment prices are no higher than they were at the opening of the year, when the value was £18 for raw and £19 10s. per oz. for refined metal. Towards the end of February a keen demand sprang up both for raw and refined, and the latter was suddenly advanced to £23 and even £24, while refiners were ready buyers of raw metal at from £20 to £21. At this level, however, a good deal of platinum was attracted from various Continental sources, including the United States. The greater part of this doubtless came originally from Russia, and the substantial advance was not maintained for very long, having been largely the outcome of a temporary active demand for the usual trade purposes at a time when the market was short of supplies. The price in New York, which had similarly risen from a level early in the year ranging from \$80 to \$85 up to \$95 per oz., has also relapsed to the lower level under a decreased demand, while the substitute-palladium-stands there at \$50 to \$53 per oz., compared with the nominal quotation current on this side of about £13 per oz. The fact deserves notice that this shows a discount of fully £5 per oz. compared with the actual value of platinum. This is more in keeping with normal conditions, and shows a sharp contrast to what happened during the war period, when palladium generally commanded a premium over platinum amounting to as much as £5 per oz., due to the pressure of demand on the latter as a result of the severe restrictions on the use of platinum. The scarcity of palladium early in 1920 was still so pronounced that its price reached £40 per oz., thus exceeding the highest record for platinum by 30s, per oz. The current price of refined platinum at about £18 thus compares with £38 10s., the record just referred to, which was reached over two years ago. A few months later the

market suddenly collapsed badly to the extent of £12 10s. per oz. to £26. Successive further reductions ensued, bringing down the price by the end of 1920 to £23, due to some Russian parcels offering from Scandinavia. There was a further set-back in the course of last year under generally depressed conditions, which were current until the upward reaction, already dealt with at the beginning of this article, ensued. The price in America previous to the big collapse in 1920 had been run up to over \$154 per oz., and it was then cut by more than one-third to about \$100. This event was accelerated by the liquidation of the greater part of the United States Government surplus stocks, which were chiefly held by munition makers. A certain amount of this platinum went into dealers' hands, part of which apparently found its way to the London market. Prior to the war the price stood at £9 5s. per oz., so that the present figure is practically double what the metal was then selling at and is still very high. Ample allowance, of course, has to be made for the fact that the Russian industry is still more or less in a chaotic condition, although it has improved a little since 1918. It is unlikely, however, that the output in the Urals has by this time reached as much as 50,000 oz., or, roughly, one-third what it amounted to before the war, as officially reported or registered through the Customs offices. No trustworthy returns have been obtainable for more recent years. The following were official returns in ounces troy: 1913, 157,735; 1914, 157,182; 1915, 119,789; 1916, 78,682 oz. These figures, however, of production from placers do not fully represent the output, a considerable portion of which is known to have escaped registration. According to the returns compiled by the U.S. Geological Survey, which allow for metal stolen or smuggled, the Russian production was thus in ounces: 1913, 250,000; 1914, 241,200; 1915, 124,000; 1916, 63,900; 1917, 50,000; 1918, 25,000; 1919, 30,000; and 1920, 35,000. Full reference is made to these figures in a pamphlet recently issued in this country by the Imperial Mineral Resources Bureau, this being the first year of publication. The production in the British Empire, including Canada, India, New South Wales, and Tasmania, which amounted in 1913 to 1,780 oz., declined to 1,300 oz. in 1914, falling to as low as 328 oz. in 1916, but recovering to 2,253 oz. in 1918, and reaching 2,822 oz. in 1920, the great bulk of which was produced The American output is small, having in Australia. fluctuated between 1913 and 1920 from 483 oz. up to 824 oz., falling back to 613 oz. in 1920. Next to Russia, the most important source of supply is Colombia, where the output has been at a steadily advancing rate—from 15,000 oz. in 1913 to about 35,000 oz. in 1920, Japan has also been producing a little in recent years, as well as Borneo and Sumatra. Based on the official returns mentioned for Russia, the world's production, which for 1913 amounted to 175,181 oz., showed a little increase the next year, but decreased gradually to 62,951 oz. in 1918 and recovered in 1920 to 73,435 oz. The pamphlet of the Imperial Mineral Resources Bureau contains some very interesting particulars as to the state of the industry in general, covering platinum and allied metals during the war period. Regarding the uses of the precious metals, it is stated that during that period pure platinum was used in increasingly large quantities in munition plants as a catalysing agent in the contact process of making the highly concentrated sulphuric acid employed in the manufacture of high explosives, also at plants for the manufacture of nitrate from atmospheric nitrogen. It has been estimated that towards the end of the war

some 500,000 oz. of platinum was in use in the making of "contact" acid, the metal not being actually destroyed in this process, almost all of it being recoverable. There is also a large consumption of platinum in the manufacture of evaporating-dishes, crucibles, stills, and other utensils used in chemical laboratories and many chemical industries. The use of platinum in the electrical industry is decreasing. An alloy containing 33 per cent. of that metal and 67 per cent. of silver is employed as a standard of electrical resistance. The so-called "platinum" used in electrical work is an alloy of platinum and iridium, the proportion of the latter ranging from 15 to 50 per cent., and averaging about 20 per cent. Substitutes of lower price have been found for platinum for electrical purposes. In the manufacture of incandescent lamps the wires are no longer made of platinum, but of nickel-chromium alloys or of tungsten or molybdenum. For many high-duty electrical contacts, however, not quite satisfactory substitutes for platinum appear as yet to have been found. Platinum and alloys of silver with from 25 to 33 per cent. of platinum have been largely used in dentistry. A considerable amount has for some years past been used in the United States for jewellery, although much of this was merely a plating over some inferior metal. After the entry of that country into the war, the use of platinum for jewellery decreased considerably, only 12 per cent. of platinum metals being consumed in 1918. Since the Armistice, however, platinum has been increasingly in demand for jewellery in the United States, considerably more than half of the platinum metals used there in 1919 and 1920 being so employed. Platinum is used, of course, in the preparation of platinum salts, notably chloride, for photographic work. Miscellaneous uses of platinum include medical purposes (needles for syringes, etc.), for which the French authorities are understood to have employed during the war nickel which had undergone a special thermal treatment, or an alloy of gold and platinum. In recent years molybdenum plated with platinum is said to have been widely employed for artificial teeth in the United States, while during the war palladium-gold alloys were extensively used in American dentistry, so as to release platinum for military purposes. Other uses of platinum are in the manufacture of certain gunnery appliances and signalling instruments; while an alloy containing 73 per cent. of silver and 27 per cent. of platinum is employed for soldering the latter metal. As far back as 1823 a platinum coinage was issued by the Russian Government, the intrinsic value of the metal being then reckoned at less than six times that of silver and only slightly more than one-third that of gold. In 1845 the minting of platinum was abandoned, its price having appreciated to such an extent as to make the coins of greater value for exportation as metal than for their nominal worth as money. It was recently reported that the Soviet Government contemplated the issue of a new type of credit note backed by reserves of a platinum coinage; but in this connection it has to be remembered that the metal is much rarer than gold, while its production is erratic, and its price subject to wide fluctuation. Regarding palladium, this metal is chiefly employed in the manufacture of palladium-gold alloys, now extensively used in dentistry, and also to some extent in the jewellery and chemical industries. It is estimated that the total world's production of platinum up to the present time has been approximately 11,000,000 oz. troy, of which Russia has contributed about 90 per cent., Colombia about 7 per cent., and Borneo about 2 per cent., while the remainder has been almost

entirely secured from the United States, Australia, and In 1909 the Société Anonyme d'Industrie du Platine obtained control of the greater part of the Russian output, and British and other buyers thus became largely dependent on Paris for their supplies. The French contracts have now expired, and there is some talk of the greater part of the output being in future refined in Russia owing to the heavy ad-valorem export duty on Russian crude platinum imposed in 1914, and also to later restrictions, as well as the completion of a Government-controlled refinery at Ekaterinburg in March 1916.

The Filey Olive-Oil Case

The case reported in the C. & D., May 6, p. 43, of an analyst's error in reporting that pure of oil contained arachis oil, resulting in the prosecution of a chemist for adulteration, was unfortunately made worse by the autocratic procedure of the prosecuting authority. The olive oil was supplied to the chemist by Bleasdale, Ltd., York, who, knowing that it was the finest oil obtainable and had been bought on their own analyst's certificate of purity, took up the defence. The sample left with the chemist was examined by Mr. John Evans, of Sheffield, and found to be free from arachis oil. Messrs. Bleasdale thereupon suggested to the prosecution that the case should be adjourned until the Government analyst had reported on the third sample. The prosecution would not consent to this course being taken, but preferred to allow the chemist and the wholesaler to remain for six weeks under the stigma of having sold adulterated drugs. The East Riding County Council, as reported last week, was ordered by the bench to pay £11 15s. towards the costs. That amount, however, by no means represents the cost of the defence.

The Cocaine "Stunt"

Most of the lay Press are devoting considerable space to "revelations" regarding the illicit trade in cocaine and morphine. Many of the tales that are told are fantastic in the extreme and clearly the product of the imagination of the "argus-eyed sleuths" as "Truth" sarcastically calls the reporters. One favourite suggestion is to increase the penalties and inflict corporal punishment on purveyors of cocaine. As a writer in "The Times" points out this would obviously be useless in cases where women are the culprits—it is extremely unlikely that public opinion would tolerate flogging as a punishment for the female sex. If such a penalty were inflicted on men the traffic would soon become a feminine monopoly. Sir William Collins writes a long letter to "The Times, mainly devoted to the very stale subject of the Hague Convention of 1912. He concludes that it is necessary to bring under control the sources of manufacture and supply of opium, morphine, and cocaine by means of the League of Nations. He is careful not to mention how this can be done whilst Turkey, China, and Germany are outside the League. Mr. Ingleby Oddie, the Westminster coroner, in the course of an interview touched upon the danger of selling diluted cocaine to drug-victims-when by chance the pure product is supplied a poisonous dose is taken in error. Mr. Oddie pointed out that the Dangerous Drugs Act in some respects was too harsh in its operation. "If you go to an oculist," he said, pay two guineas for a prescription for an eye-wash containing cocaine, your forfeit the prescription on handing it to the chemist to be made up. You can only receive the exact quantity indicated by the prescription, and if it is necessary to have another bottle of the eye-wash you must go to the oculist again, and, presumably, pay another two guineas. The specialist is bound to mark the prescription 'not to be repeated,' and the chemist by law must retain it. It should be possible to avoid this and still carry out the intentions of the Act.' He further expectations are the act. further suggested that medical officers of health should control the sale of "dangerous" drugs in each district.

Westminster Wisdom

By the "C. & D." Parliamentary Representative.

THE SANTONIN CASE

Captain W. Benn asked the President of the Board of Trade, on May 9, what was the total cost incurred by the Government in connection with the case before the referee with regard to santonin?

Sir W. Mitchell-Thomson replied that certain of the items of expenditure have not yet been settled, but the total cost, including charges for shorthand notes, will be approximately £135.

REGISTRATION OF BUSINESS NAMES

Mr. Baldwin, on May 8, stated in the House of Commons that the total number of business names registered in England and Wales in accordance with the Registration of Business Names Act, 1916, which were effective on May 4, is 152,335. The fees received during the financial year ended March 31 amounted to £5,502 15s. 6d. The expenses during that period amounted to £8,906 11s. 7d. It is proposed to increase the fees.

Dangerous Drugs Act

In reply to a question in the House of Commons on May 4, the Home Secretary said that six months is the maximum sentence of imprisonment that can be imposed on a first conviction under the Dangerous Drugs Act, but it is not the maximum penalty, as a fine up to £200 can be imposed as well. The working of the present regulations, which only came into force on September 1, is being carefully watched by his Department, which is in close touch with the police authorities, and if it appears that the present powers are insufficient he should not hesitate to come to Parliament for further powers. It is clear, how-ever, in view of the international character of the traffic, that it can only be effectively dealt with by international co-operation, and the whole question of the measures necessary to cope with the traffic has been engaging the attention of the Advisory Committee appointed by the League of Nations. Their proposals, when received, will be carefully considered.

Postal and Telephone Charges

In the course of the debate in the House of Commons on May 4, on the Post Office vote, the Postmaster-General gave details of the changes that are to take place in postal and telephone practice. They are summarised as follows:

Sunday Collections

To start at midnight, Sunday, May 28.
Estimated cost, £250,000 in a full year.
Sunday deliveries, not being demanded by the business community, are not to be reinstated. They would cost £400,000.

Postage Rates

Inland letter rate, not more than 1 oz., reduced from 2d. to 1½d. Will cost £3,800,000.

Empire letter rate and to the United States, not over 1 oz., reduced from 2d. to 1½d. Will cost £150,000.

Postcards, 1½d. to 1d. Will cost £600,000.

Printed paper rate, from 1d. to ½d. Will cost £1,649,000.

This is the old pre-war charge for what is mainly a business nost.

Post,
These changes will come into force on May 29.
No reductions in the parcel rate or on newspapers.
Printed paper should be posted before 3.30 p.m. in

Telephone Changes

Telephone Changes

Reduction of 30s. a year in the telephone rentals of private users, bringing down the rental in London from £8 10s. to £7. This will cost £200,000 in a full year.

The reduction will not apply to business users.

Local message fees to be reduced from 1½d. to 1¼d., at a cost of £440,000 a year. It is estimated that this will increase the number of calls by 5 per cent.

Extra mileage charges to be reduced from £10 to £8 per mile, at a total cost of £142,000.

Reduction of 25 per cent. for trunk calls between 2 p.m. and 7 p.m. No reduction during the morning hours. Specially reduced rates are already in vogue for trunk calls after 7 p.m.

The additional local fee will be abandoned on all trunk calls above 1s. 6d.

Increase in the number of country installations.

Cheaper Perfumes

At the time of writing it does not seem likely that the Chancenor of the exenequer will grant any renef to manufacturers of perfumes by reducing the amount of duty on spirit used in periumery. It was pointed out in the U. & D., April 29, p. 64, that the periume trade has been reduced to a fith of what it was before the war, and, moreover, the yield of the tax on pertume spirit, notwithstanding that it is five times what it was in 1015, was in 1941 actuary less than in the pre-war year. With a view of reviving the perfume industry we have been examining the various suggestions that have been made to prepare pertumes without using ethyl alcohol. This costs 20s. bd. per 1b., the retail price of which makes perfume compounded with alcohol prohibitive to the general publie.

The most promising substitute for ethyl alcohol with which we have experimented is iso-propyl aicohol or dimethylcarbulol, (Cn3)2CHOH or C3n80. There are two propyl alconois, the normal and the secondary or isopropyr a conor; it is the latter with which our experiments have been made. The physical characters are not very dinerent from those of ethyl alcohol, the sp. gr. at 15° is 0.791 and the boning-point 82-85° C. Iso-propyl alcohol burns like cthyl alcohol, is clear and colourless, and its odour is similar but rather more pungent. Freedon from odour of impurities is the main requirement in a pertume spirit, and the tact that the sample of isopropyr arconol with which we have experimented has a distinct odour is a factor against its use in the more deficate varieties of pertumery. Iso-propyl alcohol mixes in all proportions with water, ethyl alcohol, and ether, but aikan haloids are less soluble in it than in ethyl alcohol. With essential ons, resins, and gums we have not detected any dinerence in solubinty. Applied locally, isopropyl alconol seems to be a stronger stimulant than ethyl alconol, and one would expect the pharmacological properties to be more pronounced. There is not enough evidence that iso-propyl alcohol is physiologically harmless to enable it to be recommended for pharmaceutical prcparations intended for internal use, but we are demnitely informed that the alcohol is non-poisonous.

In regard to the manufacture of iso-propyl alcohol the following are the ordinary methods:

1. Acetono (one part) is diluted with water (five parts) and sodium amalgam slowly added. The liquid is distilled, and the process repeated on the distillate.

2. By boiling iso-propyl iodide (one part) with water (ten parts) and load hydroxide.

3. By heating iso-propyl iodide (one part) with water (twenty parts) at 100° C, for forty hours.

Iso-propyl iodide is made by heating glycerin with hydriodic acid and phosphorus. In British-made iso-propyl alcohol one of the above methods is used, or it may be separated from fusel oil by fractional distillation. Recently, however, a process has been evolved in the United States by which propylene obtained as a by-product of petroleum-cracking stills is converted into sopropyl alcohol. By the Ellis process the gases from the stills are allowed to bubble through cool sulphuric acid of sp. gr. 1.8, until the sp. gr. falls to 1.3 or 1.4. acid liquor is diluted with water and polymers, higher alcohols, etc., allowed to separate. The diluted liquid is alcohols, etc., allowed to separate. The diluted liquid is then steam distilled. A small amount of olefines and propyl ether first appears in the distillate, and then isopropyl alcohol comes over. This product purified by redistillation is "Petrohol," marketed by the Anglo-American Oil Co., Ltd. (C. & D., April 29, p. 62). Iso-propyl alcohol costs 5s. a pint in small quantities, and it is obvious that perfumes made with this spirit could be sold at the pre-war prices charged for ethyl could be sold at the pre-war prices charged for ethyl alcohol products, bearing in mind, however, that the essential oils and other odorous principles are still much higher in price than they were in 1913. We have compounded passable perfumes for retail trade from recipes given in the C. & D. Price List Formulary, published in the first five issues of the C. & D. for this year. The cost and selling price of these and other toilet preparations

in which spirit is employed have been worked out as

_	Cost	Selling Price			
	lb.	lb.	4 oz.	1 oz.	1 dr.
Aqua Floridensis , Lavand., P.F.3 , P.F.7 , Mellis, P.F.3 Brilliantine Sep Insep. Eau de Cologne, P.F.2 Eau de Cologne, Sec Toilet vinegar	8. d. 7 10 24 5 11 4 6 9 10 6 7 6 12 6 10 0 11 4	s. d. 17 0 13 6	s. d. 3 3 9 5 4 5 2 9 4 6 3 2 4 10	s. d. 11 2 6 1 2 9 1 2 10½ 1 4 1 1 1 3½	d. 4½ 2 2 2½ 2

As a useful method of differentiating propyl alcohol from ethyl alcohol the following should be noted

One c.c. of saturated solution of calcium chloride added to 5 c.c. of iso-propyl alcohol turns milky and separates into two layers. The same test with 90 per cent. alcohol yields a clear solution.

Sponges and Sponge-buying

By an Expert

THE public, and even many sponge dealers, are not aware of the numerous manipulations Mediterranean sponges have to go through from the moment they are fished until they are packed for the British market. When found alive at the bottom of the sea (as is generally known) sponges contain a gelatinous substance, and (as is less generally known) are covered by a black skin or membrane. The first thing that has to be done is to freo the sponges from the black skin and the gelatinous substance, the smell of which is very similar to that of putrid fish. This work is done by the fishermen themselves. The black membrane is removed by scraping with a knife, and the gelatinous matter is extracted by squeezing the sponges with the feet on the deck of the boat. The sponges are then rinsed several times with sea water. When this is done, the sponges are threaded on cords and hung to the masts of the boats to be dried. When dry, they are pressed and packed in bales for sale on the markets of the Mediterrancan, cither by weight or per piece. The preparation for the markets is done but the markets of the markets of the Mediterrancan, cither by weight or per piece. market is done by the sponge dealers themselves, who immerse the sponges in sea water so that they may cut them suitably and clean the roots, to which generally adhere many small pieces of rock, shell, and seaweed. After having been cut and cleaned, the sponges are placed in a bath of diluted sulphuric acid (1-20) which removes the bright red colour of the roots. The sponges are then again washed thoroughly in sea water to free them again washed thoroughly in sea water to free them activally from the sulphuric acid, afterwards they them entirely from the sulphuric acid; afterwards they are placed in a bath of slaked lime and water and rinsed in sea water once more. They are then sanded and dried. Next comes the sorting. The sponges are graded first according to their qualities and then according to their since (12 or 15) in each particular quality. They to their sizes (12 or 15) in each particular quality. They are then packed in cases.

This brief description gives an idea of the numerous and delicate manipulations sponges have to go through before they are ready for the market. These various manipulations must, of course, be made by an experienced staff; and only a few important concerns have the suitable installations and the capable specialists necessary to do this work in the perfect way which gives confidence and satisfaction to the eventual buyers. The question of confidence, indeed, plays a great part in the spongetrade—real experts being rather rare. A good many firms have been deceived both as regards the quality and the packing of sponges, and have consequently lost interest in this commodity and prefer to restrict their business. This is wrong, as competition in the spongetrade is less acute than in many other trades, and they thus neglect a good source of profit.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for hulk quantities or original packages. To these prices various charges have to be added, wherehy values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk grantities. bulk quantities.

42 Cannon Street, E.C. 4, May 11

In spite of the fact that business in the Mincing Lane produce markets remains below the normal, there are evident signs that prices are now more stabilised, and in some instances show a tendency to harden. This applies particularly to pharmaceutical chemicals; quotations from the Continent for forward delivery continue to show up at higher rates, and this is having a good effect on spot prices. Wholesale druggists report business as showing an improvement, but some time must elapse before the Mincing Lane markets feel the beneficial effects of this. Among the changes of the week is an easier feeling in menthol, due partly to the liquidation of stocks of a New York house, and anticipated cheaper prices for arrival goods. Japanese camphor on c.i.f. terms is easier, but spot is unchanged. Canary seed is firm and considerably dearer owing to reports of damage to the Moroccan crops. Cumin seed is very scarce and dearer; fenugreek tends easier. Cod-liver oil is quiet and distinctly lower. Quinine is firmer in second hands, price closely approaching that of the makers. Opium remains very firm at primary sources owing to the much-reduced sowings. Nux vomica is selling at easier rates. English seconds castor oil is 1s. lower, medicinal being unchanged. Senega is quiet, and ergot is a shade easier, but selling rather moro freely to consumers. Galls are steady; relatively cheap offers of honey are being made.

Higher	Firmer	Easier	Lower
Albumen (egg) Anise oil (star) Canary seed Cocaine Guaiacwood oil Saccharin (British) in bond Turpentine	Caraway oil Citric acid Citronella oil Formaldehyde Geranium oil Lemongrass oil Peppermint oil (Amer.) Quinine (sec. hands) Sodium prussiate Spearmint oil Tartaric acid Steadier Barbitone	Bergamot oil Camphor (Jp., ref. c.i.f.) Cassia oil Cedarwood oil Ergot Fenugreek seed Groundnut oil (deod.) Jalap resin Jalapin Juniper berry oil Lemon oil Menthol Mint oil (Jp.) Orange oil Podophyllin resin Sandalwood oil	Apiol Atropine sulphate Cod-liver oil (Norw.) Cubeb oil (c.i.f. Farina Palm oil Saccharin (for- eign, in bond) Shellae Wood oil Wormseed oil (c.i.f.)
	Paraformal- dehyde	(W.I.)	

Cablegrams

NEW YORK, May 10.—Business is quiet. Menthol is lower at \$5.75. Cartagena ipecacuanha is cheaper at \$1.65, and Mexican sarsaparilla has been reduced to 40c. per lb. Jalap is ehcaper at 17c.; likewise scnega at \$1.10. Vanillin is lower at 52c. Peppermint oil in tins has advanced to \$1.80. Phenacetin is dearer at \$1.85, as

is antipyrine at \$2.25 per lb.

Bergen, May 11.—The total catch of cod for the whole of Norway since the opening of the scason amounts to 37,000,000, against 34,400,000 for the corresponding week of last year, and the yield of steam-refined medicinal oil is 64,081 heetolitres, against 52,256 hectolitres for the same period of 1921. The market for finest new non-freezing medicinal oil is easier at 110s. to 112s. per barrel

c.i.f. U.K. ports.

Crude Drugs, etc.

AGAR-AGAR continues firm, with good white No. 1 quality still very scarce at 4s. 6d. per lb.; No. 2 is 3s. 11d. To arrive, No. 1 new crop is 3s. $11\frac{1}{2}$ d. and No. 2 3s. $9\frac{1}{2}$ d.

Aloes.—Good livery Curação from importers offers at

85s. per cwt. Cape continues weak.

Antimony.—There has been very little doing, the tone being dull, with crude varying well upward of £14 per ton, according to position. A fair supply is available. English refined is being taken in small lots at £33 to £35, according to brand, and foreign is offering at about £23 c.i.f.

Asafetida.—The London stock at the end of April was fairly large—485 packages, against 296. The deliveries in April were 47, and the arrivals 3.

BUCHU.—Fair round green is still obtainable at 3s. 3d. per lb. on the spot. It is quite evident of late that important supplies have been collected outside of Crown lands at the Cape, and not therefore subject to the tax

of 3s. per lb.

Calumba.—The London drug statistics for April reveal a stock of 17,598 bags, against 20,189 bags in April 1921.

Arrivals in April were nil, and the deliveries 33 bags.

Camphor (CRUDE) is steady, with spot sellers of Chinese at 3s. 3d. per lb., and for May-June shipment 2s. 11d. per lb. e.i.f. is quoted.

CAMPHOR (REFINED) has been in slightly better dcmand for shipment. Japanese 2½-lb. slabs offer at 3s. 6d. per lb. on the spot, and May-June shipment has been sold at

3s. 3d. c.i.f., and June-August shipment at 3s. 3d. e.i.f.
CANTHARIDES.—Several arrivals of Chinese have taken place; spot can be had at 4s. 6d. per lb., and to arrive

4s. 2d. e.i.f. is quoted, CASCARA SAGRADA.—There were no arrivals at, or deliveries from, the Cutler Street drug-warehouse in April. The stock was 37 tons, against 56 in April 1921.

Chamomiles remain firm at between 400s, and 450s, per

cwt. for good white.

CINCHONA.—At the Amsterdam auction held on May 3, 1,189 bales and 155 cases Java pharmaccutical bark offcred, of which 124 bales and 87 cases sold, weighing 9,378 kilos, and containing the equivalent of 198 kilos. paid ranged from 40 cents to 1204 cents per ½-kilo.

Cod-liver oil.—Our Bergen correspondent writes on May 6 that last week the codfishing at Finnarken was very favourable. The total output of all the codfisheries for the whole of Norway, compared with that of the preceding years, is as follows:

				Yield of steam-	Livers for
			Catch of	refined cod-	crude oil
			cod	liver oil (hect.)	(hcct.)
\mathbf{T}_{0}	April	29, 1922	33,700,000	60,665	10,390
	79	30: 1921	33.700,000	51.808	9,613
	May	1, 1920	31,200,000	46.600	5,000
	,,	3, 1919	18.900 .00 0	24.200	3,100
	**	4, 1918	15,300,000	15,200	4,200

The prospects of the Finmarken fishing are extremely good; the cod is around in great quantities, and also the number of fishermen is considerable. The market for on continues dull, without demand, and prices are easier at from 105s. to 112s. per barrel c.i.f. London for finest non-freezing quality, but it is not impossible that a lower rate would be accepted. Dealers in London report the market as quiet and somewhat easier; finest brands of new Lofoten medicinal oil offer at from 102s. 6d. to 108s. per barrel c.i.f. London. oil continues dull, without demand, and prices are easier

ELEMI.—The London drug statistics for April show a stock of 1,279 packages; there were no arrivals during

that month, the deliveries being six.

Ergor has been selling at slightly easier prices of late, including good sound Spanish at 4s., and slightly less for quantity.

Galls are steady, Persian blue on the spot offering at 62s. 6d. per cwt., green at 52s., and white 47s. 6d. to 5

HEN-YOLK is steady, with spot sellers of Chinese (2 per cent. boric acid) at 140s. per cwt., afloat at 130s., and buyers of April-June shipment at 105s. c.i.f. Dried yolk ris offered at 4d. per lb., spray whole egg is 6d., and native dried whole is 4d. per lb., all spot. Prime Chinese hen-albumen on spot is dearer at 3s. 1d. to 3s. 2d. per lb., and for April-June shipment 2s. 9½d. per lb. e.i.f. has been paid.

Honey.—Offers on the market include white Californian in eases at 65s. per cwt., white Cuban in barrels at 45s., light amber Cuban at 45s., light amber Hawaiian in cases

Also afloat white Californian in cases at 60s., light amber ditto at 50s., white Hawaiian in cases at 50s., and light amber ditto at 45s. These prices are for round lots.

IPECACUANHA.—The deliveries from the drug ware-houses during April were 41 bales Matto Grosso, and the arrivals 22 Matto Grosso and 5 East Indian, leaving a stock of 293 Matto Grosso, 48 Minas, 5 Cartagena, and 25 East Indian—a total of 371 packages, compared with 614 packages in May 1921.

LIME JUICE.—Good West Indian quality is scarce in

the open market; fair from second hands can be had

at 3s. per gallon.

LIQUORICE ROOT.—Common natural Russian on the spot is quoted at 32s. 6d. per cwt., and Levant at 30s. c.i.f.

to arrive.

Magnesium is steady, with a fair demand at from 4s. 6d. to 5s. per lb. for English make, but there are continued cheap offers of Continental at over 1s. per lb. under this range of prices on c.i.f. terms.

MENTHOL is flat and easier on the spot, sellers quoting Kobayashi-Suzuki at 24s. pcr lb., and May-June shipment at 21s. per lb. c.i.f. The liquidation of the stock of a New York house has brought about lower prices at

that source.

The market has been generally less active Mercury.and somewhat easier, only a limited demand coming forward from home users, while export business slackened off. It is generally realised that consumption is nuch below the normal, and competition is rather keen in the present state of trade. The price of Spanish mercury is £11, and ready lots of Italian can be obtained at £10 10s. to £10 15s. per bottle, although some sellers are asking 2s. 6d. morc. The outlook is thus somewhat uncertain, while good accumulations are in existence on either side of the Atlantic.

Nux vomica.—More business is passing recently at easier rates. Bombay is offered at 27s. and Madras at

23s. per cwt. on the spot.

OLIVE OIL.—Finest Nice edible is offered at 9s. 11d. per gallon spot and 9s. ex wharf for forward delivery.

OPIUM.—In the absence of adequate spot supplies of Turkish, it is difficult to say what the actual value isprobably 13s, to 13s, 6d per lb, for druggists'. From Smyrna 12 per cent, has been quoted at 12s, 6d, per lb. c.i.f., but sellers look for higher prices, in view of the large reduction in the acreage planted with poppy, and are reported to have retired.

CONSTANTINOPLE, April 17.—During the first fortnight of the current month no sales were effected for Japan; howthe current month no sales were effected for Japan; however, business increased to 88 cases of druggists at from 890 to 915 piastres per oke, and 53 cases "softs" at 1,000 to 1,170 piastres. At Smyrna sales have increased to about 100 cases, without any important variation in price. The slight decline in the English rate of exchange and the demand for good quality has resulted in an advance of from 7 to 8 por cent., and the market has taken a firmer tendency. We ought, moreover, to state that good quality daily becomes comparatively searcer as stocks diminish. On the other hand, we have had confirmation from a good source that the sowings of opium in Anutolia as well as in Macedonia are restricted, and for this reason the crop will not be abundant, in spite of the favourable weather. not be abundant, in spite of the favourable weather.

smyrna, April 29.—The activity in opium reported in our last monthly circular of March 31 has continued throughout the present month with gradually advancing figures, until we reached as high as 12s. per lb. c.i.f. for 12 per cent. The reason for this advance is not-only owing to a brisk demand from consumers, but also to our depleted stocks, as the arrivals are small and far between. We have been informed that constant shipments are being effected from the North Asia Minor ports to Russia, which we presume is destined for the Far Eastern markets by way of Siberia. This, as everyone understands, will yery soon deplete out. This, as everyone understands, will very soon deplete our interior stocks, especially as our crops are getting less and less every year. Another factor which must be taken into consideration is the high prices for labour which growers, when they can find it, have to pay. In pre-war times the when they can find it, have to pay. In pre-war times the average price of labour in the interior nowhere exceeded 10d. per day for every able-bodied man, and now it is over 12s., and at that figure farmers complain that there is a great dearth. The total amount of opium which changed hands during this month is about 15 680 lb., and the average sterling price paid is 11s. 3d. per lb. c.i.f. port

of destination. The arrivals to date are 1,300 cases, against 1,370 at same date last year, and our stock in first- and second-hands is now 930. The exchange is weak at 650 piastres per pound sterling for cheque on London, and \$0.68\frac{3}{2}\$ for one Turkish pound.

RHUBARS.—The London stock at the end of April stood at the moderate figure of 690 chests, compared with 1,125 chests in April last year. The arrivals in

April were 5, and the deliverics 94.

SARSAPARILLA.—The stock in London at the end of April was 185 bales only, compared with 876 bales in April last year; the deliveries in April were 52 bales, and the landings 10.

SENEGA.—Spot prices are from 5s. 3d. to 5s. 4d. per lb.: market is quiet, the home seasonal demand being over, but there is some export inquiry to the Colonies.

SENIA.—The London stock at the end of April was the lowest for the past six years—viz., 4,739 bales, etc., and compares with 4,895 for April 1921; the deliveries for the month were 312, and the arrivals 139 bales.

Shellac.—The spot market is dull, and the price of usual standard TN Orange is 5s. to 10s. per cwt. easier at 370s. to 375s. per cwt.; fine second Orange is 410s., superfine, 440s. to 460s., RL1 440s., AC cakey 325s., and GAL 300s. The sales for delivery include May at 365s. to 355s., August at 355s. to 350s. The London stock at the end of April stood at 7,713 cases, against 6,809 cases in April 1921. The deliveries were good-4,408 cases-and the arrivals 5,066 cases.

Soy.—There appears to be practically none on the spot,

but further supplies are anticipated shortly.

STARCH PRODUCTS.—Farina is easier, the value of Japanese No. 1 for May-June shipment being 28s. per cwt. c.i.f. Dutch farina on the spot is 35s. per cwt. and May-June shipment 32s. c.i.f. Sellers of pure Erglish rice starch crystals quote £36 per ton, and Continental at £33. American maize starch powder in bags is 13s. 6d. per cwt. on the spot.

TRAGACANTH.—The stock in London at the end of April stood at 17,721 packages, against 15,991 in April 1921; the arrivals and deliveries in April were 879 and

1,528 respectively.

TURMERIC.—The London drug statistics for April show a stock of 338 tons, against 1,048 tons in April 1921. There were no arrivals during April, while the deliveries were 29 tons.

Seeds and Spices, etc.

Cloves are steady, with spot sellers of fair Zanzibar at from 1s. 3d. per lb. To arrive, May-June shipment has sellers at 1s. 2d. c.i.f. The London stock of Zanzibar is 11,082 bales, against 5,584 in 1921.

COCONUT (DESICCATED) is steady, with fine and medium Ceylon selling at 43s. on the spot; May-June and June-July shipment has been sold at 40s. c.i.f., with sellers at

40s. 6d.

GINGER.—Sales of Jamaica for export have taken place at an advance of fully 10s. per cwt. on late values, and although further consignments have arrived, there seems to be little prospect of a reduction in prices. C gingers are easier, new crop offering at 42s, 6d. c.i.f.

PEPPER is steady, with spot sales of fair black Singapore at 4d. per lb. Lampong is $4\frac{3}{3}d$. Tellicherry $4\frac{1}{2}d$. and Alcppy $4\frac{1}{4}d$. per lb., all spot. To arrive, fair Singapore for May-July has been sold at $3\frac{15}{6}d$. c.i.f., and June-August shipment at $3\frac{7}{6}d$. per lb. c.i.f. d.w. Tellicherry to arrive is 41s. 6d. c.i.f., and Alcppy 40s. c.i.f. White pepper is steady, with sellers at 71d. for fair Muntok on the spot; April-June and May-July shipment has been sold at 7.7d. c.i.f., and June-August at 7.1d. White Singapore on the spot is quoted at 7d., and May-July has sellers at $6\frac{3}{4}$ d. c.i.f. Arrivals of white pepper continue disappointing in quality, and considerable allowances are necessary.

PIMENTO is quiet, with spot values at 2 tol.; stock is 18.043 bags, against 34,610 bags last year.

SEEDS.—The following are current spot quotations: Spanish Anise is steady at 77s. 6d. per cwt., and Russian is unchanged at 71s. Canarry seed is firm and considerably dearer owing to reports of hot winds having damaged new Morocco crops. Business has been done in

Larache at 75s. per quarter, Mazagan at 87s. 6d. to 90s., Tangier at 100s., Spanish at 100s. Importers ask 100s. for Mazagan, 85s. for Larache, and 110s. for Spanish. Caraway seed is firm at from 41s. to 45s. per cwt. for Dutch as to quality. Coriander seed is quiet, sound offering at 25s. to 27s. 6d. as to quality, wormy at 12s. to 18s. as to quality. Cumin seed is higher and very scarce at 85s. per cwt. Dill seed is 30s. per cwt. Fennel seed is very scarce at 52s. 6d. Fenugreek seed is clightly again at 17s. is slightly easier at 13s. per cwt. Manchurian HEMP SEED is 16s. per cwt. Linseed is scarce, with no Morocco on spot. Good English yellow Mustard seed is 34s. per cwt., and is unchanged.

Essential Oils

A FAIR demand continues for certain articles, but business generally is described as spasmodic, although buyers cannot now be holding off for lower prices. Changes in value are fairly numerous. Guaiacwood oil is dearcr. Star anise is firm; Ceylon citronella is dearer; geranium oils are higher, particularly Algerian, which has been in good demand. Cochin lemongrass, American peppermint, and spearmint oils are firmer. Sicilian oils, which have been unstable for some time, are easier. Cassia, American cedarwood, juniper berry, Japanesc mint, and West Indian sandal (ol. amyris) are easier. Cheaper forward offers are made of Dutch cubeb and American wormseed.

ANISE (STAR).—Red Ship is quiet at 2s. 2d. per lb. spot. One holder quotes 2s. 3d. For shipment 2s. 1½d. c.i.f. is wanted.

BERGAMOT is cheaper for shipment at from 17s. to 18s. c.i.f. for 37 to 39 l.a. Spot is quoted at from 17s. 6d. to 18s.

Bois de Rose (femelle).—Demand continues to be slow,

and nominally 14s. per lb. is the spot quotation.

CAMPHOR.—White essential is unchanged at 85s. to 90s. per cwt. spot.

CARAWAY is firmer at 8s. 9d. per lb. for crude and 9s. 3d. for rectified.

Cassia.—The spot quotation for 80 to 85 c.a. is lower, following the arrival of a parcel; further shipments are on the way. For June delivery 4s. 10d. c.i.f. is quoted. On the spot 5s. 4½d. per lb. may be shaded for a line.

CEDARWOOD.—American is easier in some directions for drums at from 1s. 6d. to 1s. 7d. per lb., and cases at 1s. 8d.

CITRONELLA.—Ceylon has been in demand, and prices are firm at from 1s. 11d. to 1s. 11½d. per lb. spot. There are shipments near at hand. Java and Burmese are unchanged at 2s. 10d. to 2s. $11\frac{1}{2}$ d.

CLOVE.—English distilled is unchanged at from 8s. 6d. to 8s. 9d. per lb. net. Recent shipments of East Indian distillate have been nearly all sold. For the remaining lots 8s. 6d. is the spot quotation.

Cubebs.—Spot quotations for Dutch are made at from 32s. 6d. to 35s. per lb. For new crop oil, just being distilled, 27s. to 28s. c.i.f. is wanted.

GERANIUM.—Bourbon is firmer at 23s. to 24s. per lb. Algerian has been quietly bought up, and for spot. holders now ask higher prices; there is not much offering at less than 30s., and up to 35s. is asked in some directions.

Gualacwood.—The spot quotation has been advanced to 20s. per lb.

JUNIPER BERRY.—B.P. is easier for spot at from 6s. 3d.

to 6s. 6d. per lb.

LAVENDER.—French is quoted lower on the spot in some directions than for shipment. For c.i.f. to arrive the following are current quotations for quantity: 37 to .38 per cent. ester. 17s. per lb.; 34 to 35, 16s. 9d.; 28 to .32, 15s. 3d.; low percentage, 9s. 9d. to 12s. Spot quotations are made at 15s. for 34 to 35 per cent., and 15s. 6d. to 16s. for 38 to 40 per cent.

LEMON is easier at 3s. 4d. c.i.f. On the spot there are

sellers at from 3s. 2d. to 3s. 6d. per lb.

Lemongrass.—Cochin is firm on the spot at 2%d. per oz.; for oil testing 80 per cent. citral 3d. is asked. Fine quality Java lemongrass (80 per cent.) is quoted at .3d. spot.

Lime.—West Indian distilled is steady at 2s. 3d. per lb., single cases 2s. 6d.; hand-pressed is nominal at 11s.

Mint.—Japanese dementholised Kobayashi-Suzuki is weak at 5s. 3d. per lb. spot, with 5s. 1½d. quoted for quantity. The price to arrive is easier at 4s. 7d. c.i.f.

NEROLI.-Reports from France indicate that the next crop will be fairly good, and the price of flowers is expected to be well below that of last year. The demand for neroli in England during the past twelve months has been negligible, and good quality oil has been offered recently at about half its value, without success. This is largely attributable to the high cost of spirit.

Orange.—Sicilian sweet is easier at from 12s. 6d. to 13s. 6d. c.i.f. and upwards. Spot is obtainable at from 13s. to 13s. 6d. per lb. Bitter is quoted at 10s. 6d. c.i.f. West Indian is unchanged at 10s. 6d. to 11s.

PATCHOULI is quiet and unchanged at from 37s. 6d. per lb. for Penang and 42s. 6d. for Mysore.

PEPPERMINT.—American natural oil, in tins, is firmer at from 9s. to 9s. 6d. per lb. on the spot. Some importers ask 9s. 6d. c.i.f. for shipment.

ROSEMARY.—Spanish on the spot is steady at 2s. to 2s. 3d. per lb.; 1s. 11d. for ton lots.

Sandalwood.—West Indian (ol. amyris) is easier at 17s.

per lb. spot; B.P. East Indian is quoted at 26s. per lb. from private importers.

Sassafras.—Genuine American is 6s. per lb. spot, which can be shaded for quantity.

Spearmint.—American has advanced further to 14s. 9d. per lb. c.i.f.; spot is now 15s.

THYME.—Reports from one of the districts in Spain where high-percentage thymol oil is distilled state that the crop, which will be started on next month, will be small owing to the drought. The following are c.i.f. quotations for shipment in quantity of red thyme oil (carvacrol or thymol): 25 per cent., 4s. 7d. per lb.; 40 to 45, 6s. 1d.; 60 to 70, 7s. 11d.

VETIVERT.—Bourbon is being held for higher prices in some quarters, 22s. being the price mentioned; some holders will still sell at 20s. 6d. spot.

Wintergreen (sweet birch oil) is offered at from 13s. to 14s. per lb. on the spot.

Wormseed .- American is lower to come forward at 18s. 3d. c.i.f., at which business is reported done; spot is unchanged at 19s.

Pharmaceutical Chemicals, etc.

The reports to hand this week point to a much steadier market. Business is certainly still far from normal, but is gradually picking up, and prices are now being firmly maintained. Quotations from the Continent for forward shipment continue to show up at higher rates, and this is having a good effect on the spot. Cocaine is still rising, and bromides are very firm.

ACETANILIDE is being maintained at about 1s. 4d. per lb. and secms fairly steady.

AMIDOPYRIN remains neglected, with offers at about 17s. per lb.

Ammonium benzoate continues almost nominal and quoted at 4s. per lb.

Aspirin is very firm and in good demand; spot material is 3s. per lb.

ATROPINE SULPHATE has been offered from dealers' hands at from 11s. 6d. to 12s. per oz.

Barbitone is steadier this week, and held at 10s. 6d.

per lb.

Benzoic acid is unaltered at about 1s. 6d. per lb., but business is poor.

BENZONAPHTHOL seems to be unwanted, and is offered at 6s. per lb.

Betanaphthol.—Resublimed is quoted at 2s. 6d. per lb.,

with sellers possibly at less.

Bromides are distinctly bright, and the recently advanced prices are well maintained; there has been good business done. Ammonium is now difficult to obtain under 11½d. to 1s. per lb.; potassium, crystals and granular, is maintained at 9½d. to 10½d. per lb.; sodium is also firm at 10d. to 10½d. per lb.

CAFFEINE.—English makers' prices for the pure crystals

is 16s. per lb. and 10s. 6d. for the B.P. citrate. Dealers quote about 15s, for pure.

CALCIUM LACTATE is steadier, and nothing below 2s. is being offered.

CALOMEL is offered on the spot at 4s. 3d. per lb. from importers.

CHLORAL HYDRATE.—Duty-paid continues rather quiet, with values at about 5s. per lb.

CITRIC ACID is firmer and in fair demand at 2s. 3d.

per lb.

COCAINE is still rising and has a very firm tendency, At the moment the lowest price for hydrochloride on the spot is 16s, 6d. per oz. for either French or Dutch dutypaid, but German is apparently quoted at a higher figure than the foregoing. It is anticipated that the market will go still higher.

CORROSIVE SUBLIMATE.—Importers are asking higher prices, but second-hands offer on the spot down to 4s.

CREOSOTE, B.P., remains sluggish, with offers at about 3s. per lb.

CREOSOTE CARBONATE is unchanged and seems steady, though far from active, at about 10s. 3d. per lb.

GUAIACOL CARBONATE is held at 9s. 3d. per lb. on a dull market.

HEXAMINE remains at 3s. 6d. per lb.; at this figure the market is steady.

Jalap resin.—Makers quote the reduced price of 22s. per lb. and 23s. for powder. Jalapin powder is also easier at from 40s. to 41s. per lb. as to quantity,

METHYL SALICYLATE is steady at 2s. 3d. to 2s. 6d. per lb., with a fair call on the market.

METHYL SULPHONAL is quoted at 16s. per lb., with no interest shown.

Paraformaldehyde is steadier this week, from 3s. 3d. to 3s. 6d. per lb. being asked by spot holders.

PARALDEHYDE remains weak, owing to cheap offers on

the market; nominal at 1s. 6d. to 1s. 8d. per lb. PHENACETIN is slow to move, and is offered at 5s. 3d.

per lb. PHENAZONE has not improved in demand, and is unchanged at about 7s. 3d. per lb.

Phenolphthalein is very firm at last week's better price of about 3s. 9d. to 4s. per lb. for spot.

Podophyllin resin.—English makers quote the easier

rate of 23s. per lb. Potassium permanganate, B.P., is well held at 10d. per lb., and in fair demand.

QUININE.—Dealers report the second-hand market for sulphate as firmer, as most of the loose parcels have now been disposed of, and prices more closely approach those of the makers, which are 3s. per oz. for B.P. 1898 and 3s. 2d. for B.P. 1914. A few thousand ounces of Java make were offered this week at 2s. 10d. per oz.

RESORGIN on the spot is quoted at 7s. 3d. per lb., with little doing.

SACCHARIN.—One of the British makers has advanced the price of 550 powder for export to 13s. 9d. per lb. in bond, at which regular sales are being made. Foreign make has been reduced to 6s. to 7s. per lb. in bond, as to quantity.

Salicylic acid continues quite steady at the quoted price

of 1s. 4d. to 1s. 5d. per lb. for B.P. crystals.

SALOL is slow to move, with sellers at 2s. 3d. per lb., and possibly less for quantity.

SODIUM BENZOATE is steady at about 1s. 6d. per lb., and is being inquired for.

SODIUM DIETHYLBARBITURATE remains neglected, with some very cheap offers about; nominal at 15s. to 18s. per lb.

Sodium salicylate remains steady and values are well maintained: Powder, 2s. to 2s. 1d.; crystals, 2s. 3d. to 2s. 4d. per lb.

SULPHONAL, which has not been asked for lately, is quoted at 15s. per lb.

Tannic acid.—Leviss is unchanged at 3s. 9d. per lb. This product was recently taken out of the Key List under Part I. of the Safeguarding of Industries Act, and declincd greatly in price. An appeal has now been lodged against this action, with a request that it should be again included in the list.

TARTARIC ACID.—For prompt delivery, of which there is a temporary scarcity, Is. 4d. per lb. is asked by dealers, but delivery during the month 1s. 3\frac{3}{4}d. will buy. Raw material on the other side has advanced, and importers are asking more. To arrive foreign is quoted at Is. 7½d. per lb. c.i.f., less 5 per cent. for July shipment.

Terpene hydrate is steady on quotation at 2s. per lb.,

but very little interest is shown.

THYMOL is offered at 20s. 6d. to 22s. per lb. on a slow market. Some very low offers from Germany are current,

Photographic Chemicals.—Prices as quoted last week are unchanged throughout, but are firming up owing to the good demand that is being shown.

Industrial Chemicals, etc.

London, May 10.

A FAIR amount of small business is again reported as having been done during the past week in industrial chemicals, and values have been generally maintained. There is no doubt the market is much steadier now than it has been for some time.

ACETIC ACID has been in fair demand, with prices so far maintained, but some quotations are at a slightly lower level than the figures given—80 per cent. technical, £42; 80 per cent. pure, £43; 98 per cent. glacial, £60 per ton in casks and demijohns.

Acetone.—British Government specification has experienced little inquiry for the few lots offering on spot at about £70 per ton,

ALUM remains almost idle, with Continental offered on spot at £13 per ton.

Ammonium muriate on spot is firm at about 33s. per

cwt., and there has been some demand. Arsenic is steady to firm, this being more due to the limited supplies available than to the state of the demand, while users continue to buy from hand to mouth. Quotations vary from £37 to £39 per ton for white Cornish,

according to place of delivery BARYTES holds at £4 to £6 10s., according to quality, with only a poor demand,

BLANC FIXE.—Chemically pure free from acid is quoted at £16 10s. per ton f.o.b. Hamburg.

BLEACHING POWDER (35 to 37 per cent.) is quoted at £13 per ton for Continental, with not much interest shown. American is offered at £10 10s. to £11 per ton.

COPPER SULPHATE. - With the continuation of a good export demand, the market is firm under the more exacting terms wanted by some large makers, which were placed recently on the basis of £28 10s. per ton f.o.b. Liverpool, less 5 per cent., for casks. Some of the Lancashire makers, however, are taking orders at between £28 and £27 10s. So far as can be gathered, there is not much in the way of a further saving in working costs with the metal again dearer, and foreign competition is not quite so aggressive.

CREAM OF TARTAR.—The limited spot supplies available are worth about 115s. per cwt. for B.P., and sales have been made at that figure; offers of foreign are being made for June delivery at about 105s. per cwt., less 2½ per cent. c.i.f. London.

EPSOM SALT.—Commercial quality remains neglected, with some offers as low as £6 per ton in single bags.

FORMALDEHYDE (40 per cent, volume) has recovered to £70 per ton for spot material; there has been no improvement in demand.

GLAUBER'S SALT.—Commercial quality is said to be held in large quantities and offered at very low figures; no life in the market at present; nominal at £5 10s. per ton.

LEAD PRODUCTS.—In spite of the recently materially increased terms enforced by home makers of white-lead and oxide, as reported in our previous issue, there has been a fair demand. The price of raw material is again higher. and manufacturers' quotations are expected to be maintained, as there is but little possibility of any important fall in the former at present. Litharge is £33 per ion, red-lead £31, and white-lead at £35 for imported on spot.

Oxalic acid is now firm at 81d. per lb., and some limited business has been done.

POTASSIUM BICHROMATE holds at 64d, per lb., but the

demand is still poor.

Potassium chlorate is quoted at $4\frac{1}{2}$ d. per lb. on a slow market, with a possibility of this price being shaded for good quantities.

POTASSIUM PRUSSIATE is steady at 1s. 2d. per lb. for

yellow, with red nominal, none being offered.

SAL AMMONIAC on the spot continues active, with prices well held. Dog-tooth crystals, about 54s.; medium-sized crystals, 50s.; and fine white crystals, about 34s. per cwt. for imported.

SALTCAKE is neglected at almost any price; nominal at

£5 to £6 per ton.

SODA ASH (58° per cent. light alkali) on the spot is perhaps a shade easier at £9 15s. per ton spot London. Manchester quotations are at £8 10s. to £9 per ton. British makers quote at £8 7s. 6d. per ton for home users on contract.

Soda caustic is steady but in no great demand on spot. 70 to 72 per cent., £23 10s.; 76 to 77 per cent., £25 10s. per ton, ex wharf, shipping port. Makers are quoting to domestic consumers on contract at: 70 to 72 per cent., £22 10s.; 76 to 77 per cent., £24 10s. per ton.

Soda CRYSTALS from makers for home trade only are

steady at £6 per ton, in bags, carriage paid to destination; spot lots are at about same figure.

SODIUM ACETATE on the spot is maintained at about £25 per ton, with British also at about that figure; there has been but little doing.

SODIUM BICARBONATE on spot is now at about £11 to £11 5s., with Britsh makers quoting £11 per ton delivered in bags to home consumers only.

SODIUM BICHROMATE is well maintained at 5½d. per lb.;

but the market has not livened up.

SODIUM CHLORATE remains at about 3½d. for powder and crystals, with but little demand.

SODIUM HYPOSULPHITE has been in good request and is firm at £19 10s. to £20 per ton in 1-cwt. kegs; commercial quality stands at about £14 per ton, but is dull.

SODIUM NITRATE is a good market, and holds firm at £15 to £15 5s. per ton for 96 per cent.

Sodium prussiate on the spot is a shade firmer at $9\frac{1}{4}d$. per lb., and is being inquired for fairly well.

Fixed Oils, etc.

LINSEED closes much easier and tends to go in buyers' favour. Turpentine, after a continued spell of rising values for spot, closes easier. Other products are on about the same level as last reported, with business on the quiet side. ACID OILS.—Groundant is in on the quiet side. ACID oils.—Groundant is in brisk demand on spot at about 34s.; coconut and palm-kernel at 35s. are offered, with no buyers on spot. Castor oil holds firm, and second pressings are 1s. cheaper at 50s.; pharmaceutical at 57s, and first pressings at about 52s. are unchanged. Coconut oil.—Spot remains slack, with values unchanged: Deodorised, 49s.; Ceylon, 42s.; and Cochin, 50s. Cottonseed oil closes firm and at somewhat advanced figures; good business has been done: Deodorised 54s. figures; good business has been done: Deodorised, 54s.; common edible, 50s. 6d.; soap-making, 46s.; crude, 43s. GROUNDNUT OIL has been dull, and deodorised on spot is a shade easier at 55s.; crude Oriental for shipment is unchanged at 45s. c.i.f. Palm-kernel oil.—Values are maintained on a dull market: Deodorised, 50s.; crude, 41s. PALM OIL closes at a shade lower on the week, but is now steady, and there has been a good business passing: Lagos, 34s. 6d.; softs, 33s. 6d.; hards, 31s. 6d. RAPE OIL.—The spot market remains dull, but prices are maintained: Refined, 56s.; crude, 49s. Soap Stock Ground-Nut.—None offering. Soya-bean oil.—Deodorised on spot has been quiet, with values unchanged at 48s.; crude Oriental is now quoted at 39s. Linseed oil.—Early in the week spot prices rose to very high levels and business fell away, and since then prices have had a tendency to go lower. The market closes quiet and easy at: Raw, naked, on spot, 44s. 9d.; May, 43s. 6d · May-August, 41s. 6d.; September-December, 38s. 6d.; Hull, on spot, 43s. 9d.; May, 42s. 6d.; May-August, 40s.;

Turpentine.—The September-December, 37s. downward reaction was short-lived, the market having experienced late last week and again early this week another sharp advance in all positions on speculative buying and some keen trade inquiries, in view of the seriously attenuated warehouse stocks. It looks as if an accentuated squeeze has to be reckoned with over the tail-end of the season. It is a long time since the reserves left on this side were so low as they are now. Curiously enough, the spectacular rise has been accompanied by a steady rise in the American rate of exchange, which fully emphasises the buoyant temper of the market. The position in America, of course, is much firmer. The discount on forward positions is less than it was recently, while some hasty repurchases have been effected of late against short contracts. Deliveries in the latter part of April were very heavy. On spot, market closes at 88s. 6d.; May-June, 78s. 6d.; July-December, 61s. 6d. Total visible stocks are at about 9,250 barrels, as compared with 15,300 same time last year. Wood oil is lower, Hankow in barrels on the spot offering at £69 and shipment at £64.

German Chemical and Drug Markets

THE introductory remarks of the market report, dated May 1, issued by a leading Hamburg wholesale house are devoted to the Genoa Conference. "The picture and the moods there change like the weather in April, and the new Napoleon in Paris succeeds in transforming each advance Napoleon in Paris succeeds in transforming each advance into a retrograde movement. Fanaticism and egoism prevail over right and reason. Outlawed Germany will leave Genoa arm in arm with broken Russia, and the end of the comedy will be a condition of transition and the creation of fresh possibilities for unrest. The markets are nervous. Already foreign profiteers who have bought up German goods are beginning to place them on the market in Germany. The price of coal is increasing, and this factor is paralysing all incipient enterprise. The flourishing export trade will soon cease, profits will decrease, and the lowered purchasing power of the home population cannot offer any compensation for this loss of foreign trade." The following quotations are in marks per kilo.

Acetic actor (glacial 93 to 100 per cent.).—Supplies are scanty, and deliveries are immediately taken up at m.52; for export m.60.

for export m.60.

BALSAM PERU-

-Genuine original is scarce, and has ad-

vanced to m.1,200.

BENZALDEHYDE, almost free from chlorine, for foodstuffs, has recently found increased attention at m.95, and the price is advancing.

CAFFLINE.—Stocks are being visibly cleared; quoted at m.1,050 for pure; for export m.2,200.

CALAMUS ROOT.—Natural is firm at m.20 owing to scanty

CITRIC ACID.—The depleted stocks have resulted in a very firm tendency, which is likely to lead to a further increase in price in view of the imminent seasonal demand. Offered at m.325; for export m.340. May delivery may possibly be about m.20 lower.

COUMARIN.—The demand was somewhat brisker at m.975;

COUMAIN.—The demand was somewhat brisker at in.975; for export m.1,150.

CREAM OF TARTAR (99 to 100 per cent.) has been in regular demand at in.125; for export m.150.

GLYCERIN.—Ph.G.V. quality has advanced to m.100; for

CIYCERIN.—Ph.G.V. quality has advanced to m.100; for export m.110.

HELOTROFINE has recently been neglected, and can be obtained for m.900; for export m.950.

MENTHOL has been only in slight demand; for orders of a case and more m.3,750 is offered; broken bulk m.3,900.

MILK SUGAR.—Offered for the home market at m.100.

SALICYLIC ACID.—Small sales have taken place at m.145; and for export at m.200.

and for export at m.200. SODIUM BENZOATE has been in demand at m.130; for export

SODIUM SALICYLATE.—Small quantities have changed hands

at m.150.

STRAMONIUM LEAVES.—In consequence of large foreign orders and in the absence of fresh supplies the price has further advanced to m.33, which has been paid.

TARAXACUM.—The spot stocks are being completely cleared

TARAXCUM.—Ine spot stocks are being compictely reared in consequence of foreign orders, and it is advisable to buy May deliveries at m.32 for good root.

TARTARIC ACID.—Owing to the brisk demand there has been no decline in price, foreign buyers being very active in securing supplies. Powder, granular, and crystals are offered at m.155; for export m.190.

VANILLIN.—An extraordinarily brisk domand has resulted in considerable business at m.4,500; for export m.4,900.

Safeguarding of Industries Act

Synthetic Camphor

MR. CYRIL ATKINSON, K.C., the Referee under Part I. of the Safeguarding of Industries Act, resumed, on April 29, the inquiry into the complaint against the inclusion of synthetic camphor in the list of taxable articles issued by the Board of Trade under the Act. The previous hearings were reported in our issues of April 8 and 15, and the delay in concluding it has been due to the indisposition of the Referee, as noted in our

MR. PARRY RECALLED

The complainants' case was concluded by the recalling of Mr. Parry to be questioned by Mr. Whitehead, on behalf of the Board of Trade, who put certain passages to him out of his book entitled "The Raw Materials of Perfumery," which, counsel suggested, rather differed from the general effect of the evidence given by Mr. Parry, viz., that there is a difference between artificial and synthetic, and that in this book the term artificial was used in the same sense as synthetic. Mr. Parry said that this book was of a popular nature. His view, speaking scientifically, was that synthesis was to be regarded as antithetical to artificial, and that synthesis only related to the addition of carbon atoms, and not to the mere breaking down or analysis. He did not accept the view that synthesis was a controlled rearrangement of the atoms. In that case, every artificially prepared sub-stance would be synthetic. In his view, a controlled rearrangement had never been regarded as synthesis by chemists. Since the last hearing he had looked through dozens of years of the "Journal of the Chemical Society, and in every paper which was headed "Synthesis" there was discussed the addition of carbon atoms and a building up, as distinct from isomerisation or transformation. He agreed that certain passages in the book in question had been written in a loose form for a popular edition, and there was no attempt made in it to differentiate.

Mr. Whitehead then called attention to Mr. Parry's book on "Foods and Drugs," in which it was stated that the preparation of vanillin from eugenol was a

synthetic process.

Mr. Parry replied that that required the qualification that vanillin was on the market at times in very large quantities made from eugenol, and one got into the habit of referring to it as synthetic. Similarly, he had referred in the book on "The Raw Materials of Perfumery" to heliotropine made from safrol as a synthetic product because in that book no attempt was made to distinguish between artificial (isomerisation) and synthetic (building up). In his book on "The Chemistry of Essential Oils" he had gone into the matter more scientifically. The Referee: Do you give a definition of synthesis? Mr. Parry said he did not. He only dealt with the use of the

Sir Arthur Colefax, re-examining, pointed out that in the index to the "Journal of the Chemical Society" there was a distinction between "synthetic" and "artificial." Mr. Parry added that there was nothing in his books which said that without building up there was synthesis. When the term "synthesis" was correctly used, in his opinion, there was a building up from some available raw material.

The Referee said he did not appreciate why the build-

ing up was confined to the carbon atoms.

Mr. Parry said that long before the modern science of synthetic chemistry existed—because it was only a new science, about fifty or sixty years old—the processes of oxidation and isomerisation were regular chemical re-Then came the development of building up bodies of huge complexity, sometimes twenty or more carbon atoms, by processes which had been termed synthetic, and that meaning was given to the adding of carbon atoms and building up complicated compounds, and the term, in this meaning, was used more or less in antithesis to the old processes of oxidation and isomerisation, which latter processes had been known long before the word "synthetic" was known in chemistry. There was

no building up in isomerisation and mere oxidation would not be talked of as a building-up, because, if so, every body which was artificially made would be a synthetic body. Answering the Referce, Mr. Parry said the reasons why camphor made from pinene was not synthetic were because pinene had not been synthesised, and it was merely a process of isomerisation and oxidation.

The Referee said they seemed to have got the evidence boiled down to the one point that there must be some

building up in synthesis. Mr. Parry agreed.

This closed the case for the complainants.

Mr. Whitehead, for the Board of Trade, said that unless he misjudged the position, both the Referee and Sir Arthur Colefax were in possession of the case for the Board of Trade, and it did not seem necessary for him to make any observations before calling his one witness. The course he proposed to take was to hand in a list of references to books and literature which supported the view of the Board that synthesis must be taken in a much wider sense than that put forward by the complainants. This list was handed in, as were some references of a similar character as to whether camphor is a chemical or not. In the latter list was included *The* Chemist and Druggist Diary for 1921, in which camphor is listed as a pharmaceutical chemical.

A GERMAN VIEW OF SYNTHESIS

Dr. M. O. Forster, F.R.S., was then called, and said that the counter statement of the Board of Trade, with the exception of one paragraph, might be regarded as his evidence-in-chief. The paragraph in question was one in which it was stated that in the manufacture of celluloid by the use of camphor and nitro-cellulose a chemical reaction took place. He did not wish to be responsible for that view. He had had no practical experience, or, indeed, chemical experience, in the manufacture of celluloid, and therefore he did not wish to be taken as giving evidence as to whether or not there was a chemical reaction. He would go a little further and frankly say that he was impressed with what Mr. Sproxton had said. Mr. Sproxton was a chemist actually engaged in this manufacture, and it had also to be remembered that this was not a closed question. There was still the possibility of something else arising from the study of this subject. Dr. Forster then went on to refer to a book by Prof. Julius Schmidt on "Modern Synthetic Organic Chemistry," printed in German, which dealt at length with the meaning of synthesis of organic chemistry. The book also dealt with the preparation of various compounds by what were described as synthetical processes, and some of these compounds so prepared involved substances which had no more carbon atoms in them than the substances from which they originally started. He had prepared a translation of various passages from the book to support this evidence, and these were handed in to the Referee.

The Referee pointed out that the book stated that for the purpose of the author the word "synthesis" was used as covering all artificial methods of preparing such compounds as were described. In that event, what was said in detail did not help very much, because the word was given the wider meaning. That seemed to him a most important statement, and if it was right the rest of the book would follow. The question to be decided was whether this author was justified in using the word "synthesis" in that broad sense.

Dr. Forster said his view was that this broader meaning was the one given to the word nowadays. Synthesis was understood now to mean a process in which the various steps could be controlled and followed, and the passages he had translated from the book illustrated that point. The best way of explaining the difference between synthetic and artificial was that the former involved the control of the constitution at the intermediate stages, while artificial meant haphazard. For instance, when uric acid was first produced artificially in the laboratory it was a haphazard method, but later on the real synthesis of uric acid enabled them to trace the constitution, and it was upon that synthesis that the constitution of uric acid was based. Reference was also made in this book to

substances in which there was not the addition of carbon atoms as synthetic substances, and cadaverene was a case

in point.

The Referee: Is that your view of the true meaning of

synthesis—a controlled method of production?

Dr. Forster said it was, and he thought that too much emphasis had been laid on the building up. In the early history of organic chemistry the putting of things together by carbon atoms dazzled the chemist, and for that reason for a long time people were impressed with the idea that this was the only form of synthesis. During the last twenty or thirty years, however, the word had received a much wider meaning. Summarising the examples which he had selected from Schmidt's book, Dr. Forster said there were included as synthetic products substances having a larger number of carbon atoms than when they started; substances with less carbon atoms; and also substances in which there had been a molecular rearrangement without alteration in the number of carbon atoms.

A WIDENED MEANING

The Referee: Then it comes to this, that you started years ago with a narrow meaning, and it has gradually expanded until to-day you say we have a general meaning which is very much wider. How far does the general body of chemists adopt this change? Dr. Forster said that certainly all research chemists and teachers of chemistry did. The Referee said that none of the previous witnesses had gone so far. Supposing it to be the fact that a certain number of chemists, like Dr. Forster, took the view of the meaning of the term just put forward, would Dr. Forster really think it was the commonly accepted view? Dr. Forster replied that he did think so. The Referee pointed out that although Schmidt's book was written in 1908 and Professor Thorpe's book in 1910, the latter did not appear to take Schmidt's view.

Dr. Forster said that although Sir Edward Thorpe was a very distinguished chemist, he had not paid so much attention to the organic side as to the inorganic. It was one man's work to deal with one branch, so that he himself would attach no weight to what an inorganic chemist said in regard to organic chemistry, because the inorganic chemist was not in touch with the organic

branch.

Mr. Whitehead then asked Dr. Forster to say whether he thought synthetic camphor was a chemical. Dr. Forster said he regarded it as a chemical. The Referee: Is natural camphor a chemical? Dr. Forster said he had given a good deal of thought to this, like everybody else, and he would like to define a chemical as follows: A chemical is an individual substance brought into existence in accordance with the principles of chemistry, or taking part in changes involving these principles.

The Referce said this was not very unlike the definition he himself had put forward in the santonin case. Dr. Forster said he had not had the opportunity of reading The Referee: Then it is a great comthat decision.

pliment. (Laughter.)

Discussion then took place as to how far natural camphor came within this definition. The Referee said it was not brought into existence in accordance with the principles of chemistry because it already existed. The point then was whether it was used in connection with changes in-

volving chemical principles.

Dr. Forster said that camphor had been subjected to an enormous number of investigations involving chemical changes, and speaking with a sentimental feeling, having lived with camphor all his life, to him it would be an outrage to deny that camphor was a chemical, because it was one of the most chemically changeable substances

imaginable.

The Referee: Would rubber be a chemical? Dr. Forster replied that actually it would, because rubber is an exceedingly reactive hydrocarbon, and on this basis starch and water would also be chemicals. It was repugnant to his senses that having brought a substance into being by the principles of chemistry, and being ipso facto a chemical, they should then say it was not a chemical because it was going to be used for something else. Although perhaps camphor in the manufacture of celluloid did not undergo chemical reaction, or the chemical part was very questionable, there were hundreds of trades known to the chemist in which camphor took a chemical part, and it seemed utter nonsense not to regard it as a chemical.

The Referee: Can you have a substance which, if natural, is not a chemical, but if produced artificially is? If we had a definition which excluded natural substances but brought in synthetic substances, and the substances were identical, it would be an impossible position. Dr. Forster said he did not think that natural camphor and artificial camphor were identical. Synthetic camphor was optically inactive, but natural camphor was dextroretatory, and came within the meaning of the definition he had just put forward.

The Referee (after some further discussion): Then in your view undoubtedly both synthetic camphor and natural camphor are chemicals. Dr. Forster: Certainly. Natural camphor is a chemical by virtue of the second part of the definition, and synthetic camphor by reason of the first

part.

Mr. Whitehead said the only question here was whether synthetic camplior was a chemical, and not whether natural camphor was a chemical.

The Referee (to Dr. Forster): And in your view, also, up-to-date organic chemists give this wider meaning to the word "synthetic"? Dr. Forster: Yes.

In reply to Sir Arthur Colefax, in cross-examination, Dr. Forster admitted that German chemists were mostly included in that sphere because there were more organic chemists in Germany than in this country. Sir Arthur Colefax did not cross-examine at any length, but put it to witness that in Schmidt's book it was stated that degradation was not primarily regarded as a synthetic process. He also drew attention to the "Journal of the Society of Chemical Industry," in which there was a distinction drawn between synthesis and degradation or

After the luncheon interval Dr. Forster was re-examined by Mr. Whitehead. With regard to the formation of hydrochloride from pinene, Dr. Forster said that his difficulty, speaking as a chemist, was that certain things had become so axiomatic in his mind that he had assumed they were in the minds of his listeners, and when he said that the reaction was controlled he had meant that it was performed not merely by a reaction which in previous cases had given such-and-such a substance, but a reaction which, in this case, had been put to the test by examining the product as well. He had assumed that Sir Arthur knew that, as actually he did, having had the advantage of a chemical training.

Mr. Whitehead's Final Arguments

Mr. Whitehead, addressing the Referee on behalf of the Board of Trade, said that in his judgment the substance of the Board of Trade case was contained in the original counter-statement. As to the general course of the evidence, the question before the Referee, as he understood it, was, the Board of Trade having put synthetic camphor into the list of substances chargeable with duty, whether or not the complainants had discharged the onus upon them to prove that it should not be. The discussion had proceeded on two grounds—(1) as to whether synthetic camphor could properly be included in the list as being a synthetic organic chemical, and (2) as to whether it could not also properly be included as being a fine chemical. In the first place Sir Arthur Colefax had spoken of three camphors-namely, natural camphor, turpentine camphor, and artificial camphor. Mr. Sproxton, in his evidence, had cleared up the genesis of the term "turpentine camphor," and the Referee would recollect also that the managing director of the British Xylonite Co. had many times throughout his evidence used the phrase "synthetic camphor." He was not seeking to ask the Referee to attach either conclusive importance or undue importance to that, but, having regard to the evidence as a whole, and the books and documents brought to his attention, was it not quite clear that what the managing director of the British Xylonite Co. had proved was something which was entirely in accordance with practice? It might

possibly be putting it too high to say that it was absolutely universal to speak of "synthetic camphor," The evidence was that tionably it was customary. Schering's, who made this synthetic camphor, had always called it "synthetic camphor," and invoiced it as such, called it "synthetic camphor," and invoiced it as such, while the main bulk of the documents which had been put in had referred to it as "synthetic camphor," although in one or two of the documents there was the phrase "artificial camphor," As Mr. Parry had very fairly admitted, "artificial camphor," was a wider term than "synthetic camphor," and "artificial" was the word which would naturally occur to one's mind in contradis-tinction to the word "natural." As to whether or not the substance was a "synthetic organic chemical," in what sense was the term used in the Schedule to the Act? When the complainants in the calcium-carbide case were seeking to make out that calcium carbide was a synthetic organic chemical, he had protested against too exclusive a view of the phrase, which involved splitting it up into its component parts. In the present case, however, they had a substance which he was seeking to say was a synthetic organic chemical, and he still wished to bear exactly the same thing in mind. It was from that point of view that he had asked one witness a question about wireless valves, because that illustrated his point. They would not take the word "wireless," and examine that word alone; it had to be examined as part of the whole phrase, and that had to be examined as part of the whole phrase, and that meant valves used in wireless telegraphy. He pointed out how misleading it would be to split the phrase up and examine the adjective "wireless," and seek to draw conclusions from it. He did not say that circumstances did not arise, and, in fact, might have arisen, in the present case, which made it necessary to look at the component parts of the phrase. But, taking the phrase as a whole, his submission was that the Legislature meant the phrase "synthetic organic chemical" to be used in an industrial sense, and to be interpreted in an industrial sense, and not in a strict academic and scientific way.

THE INDUSTRIAL USE OF WORDS

By way of supporting that submission, he pointed to the use of the word "chemical." The Referee had already been told by numerous witnesses on both sides that "chemical" was not the phrase which would be used from the scientific point of view; the word "compound" would be used. Again, the Act itself was dealing with industry, and it was for those two reasons that he had suggested that the proper construction of the phrase was a construction which was dictated and circumscribed by its industrial relationship. If that were so, and if it were the fact, as established by the evidence, that this camphor—not the natural camphor, but that which was prepared as the result of human agency—was usually, indeed, almost invariably, called "synthetic" camphor, subject always to the criticism that it was not a chemical at all, it was a very difficult onus which the complainants had to discharge if they were to convince the Referee that whatever the term "synthetic organic chemical" may have meant, it did not include something which had almost always been called synthetic. Here they had a substance which practically everybody in the trade had called "synthetic camphor," and had invoiced it, advertised it, sold it, and bought it as such.

Replying to the Referee, Mr. Whitehcad said he did

Replying to the Referee, Mr. Whitehead said he did not contest the point as to whether or not he (the Referee) should ascertain whether the phrase had a trade meaning, and if he came to the conclusion that it had not, he should try to find a definition, but he did ask, and press, that the Referee should remember that the word "synthetic" had been applied to this substance, and that was a matter of considerable cogency. Sir Arthur Colefax had looked behind the phrase "synthetic organic chemical," to see whether, in fact, the substance to which the term "synthetic camphor" had been applied could properly be called a synthetic organic chemical. In doing so, he had dealt with the word "synthetic" and the word "chemical." In his attack through the first word, he had tended to base that attack not so much upon the word "synthetic" as upon the

word "synthesis," and the reason for that was that the word "synthesis" had had a separate and independent use by academic chemists. He had said that there had been no synthesis at all in obtaining synthetic camphor, He (Mr. Whitehead) contended that the proper thing to do was to look at the word "synthetic" as part of the whole phrase. One reason which Sir Arthur had given for saying that there was no synthesis was that thesis meant the building up of a substance in the sense that they had added to the number of carbon atoms, and inasmuch as they started with pinene in this case and finished with a substance which had exactly the same number of earbon atoms, they had not had any synthesis. He (Mr. Whitehead) contested that by showing that there were some cases which were acknowledged in the trade and by scientific chemists as being synthetic cases, where they had a substance produced which had precisely the same number of carbon atoms as the substance with which they had started. The other side were looking at the word "synthesis" rather than the word "synthetic," and his submission was that even when one did look at the word "synthesis," having regard to evidence and cases brought forward, they did have things which were properly regarded as syntheses which did not in any sense involve the building up of a molecule by adding carbon atoms. They might have something which was properly called a synthesis, but in which they finished up with the same number of carbon atoms, or even less. Coming to the word "chemical," he submitted that, unquestionably, synthetic camphor was a chemical. Camphor was unquestionably a chemical, as camphor, and it seemed to him impossible to say that a substance obtained from source A was a chemical, but that a substance with identical properties, obtained from source B, was not a chemical.

Some discussion took place in which the Referee mentioned the evidence which had been given that natural camphor was not a chemical; if that were so, he could not quite see how the synthetic substance could be called a chemical. Then there was the point that the manufacture of celluloid from camphor did not involve a chemical change. Finally, Mr. Whitehead expressed the view that if camphor had never been used for this purpose, nobody would have had any difficulty about calling it a chemical. He submitted unquestionably that synthetic camphor was a chemical. As to its being a fine chemical, Mr. Whitehead referred to the evidence given with regard to the difficulty of preparing synthetic camphor. There were two chemists employed by the British Xylonite Co., and having regard to the difficulty involved, and the supervision, he submitted that synthetic camphor was a fine chemical. The Board of Trade was quite right in putting this substance in the list of those chargeable with duty.

For purposes of distinction, the Referee suggested that, if he came to the conclusion that the particular substance they were discussing should be left out of the list, the words "excluding camphor made from pinene" might be added to the entry, and intimated that if he did come to that conclusion he would ask the help of Mr. Whitehead and the Board of Trade in carrying it out.

SYNTHETIC CAMPHOR NOT MADE HERE

Sir Arthur Colefax, K.C., addressing the Referee on behalf of the complainants, first raised his point that the evidence had shown that there was no manufacture of the substance here, that to all intents and purposes there never had been, and there was no practical likelihood of its being manufactured here; yet the Board of Trade was still as keen, after hearing that evidence and knowing the effect of maintaining the substance in the list, on maintaining it as when—he hoved, in complete ignorance—it had first put it in. That was an extraordinary position, and he submitted that the Act did not extend to a substance which was not manufactured here.

Mr. Whitehead said that argument was irrelevant, and asked if it were necessary for him to protest against such irrelevant considerations every time.

Sir Arthur Colefax reitcrated that they had had the evidence that there was no manufacture here and no immediate prospect of it, and yet the Board still maintained that the substance should be subject to a duty the only result of which would be to handicap an established industry in its trade in the markets of the

Mr. Whitehead said he would like Sir Arthur to get somebody to say that in the House of Commons, and not before the Referee, where it was entirely irrelevant, because it gave rise to false views regarding the duties of the Board of Trade.

The Referee pointed out to Sir Arthur that the Board considered that these were matters which it was not entitled to consider. He believed the Board had in mind that when the Bill was going through Parliament it was sought to give discretion, but that power had been negatived, and, therefore, the Board took the view that it was not open to it to excreise discretion.

Sir Arthur Colefax said he had not suggested that there was any question of discretion, but that the very least the Board might have done was to take advice as to whether the Act did apply to substances which were never manufactured here, and were not likely to be. He had proved that fact, and it had not been contradicted. The question was as to whether the Referee was satisfied that this substance was one which was dutiable under the Act, and no question of onus arose there. Then Mr. Whitehead had referred to the expression "synthetic organic chemical"; he agreed that the expression should be regarded as a whole, but there was not a tittle of evidence or any ground for thinking that anybody had ever called the body they were considering a synthetic organic chemical. They had to decide whether or not this substance was synthetic, and he called the Referee's attention to books which had already been mentioned, which were authoritative books, not written for specialised persons, but for the generality of chemists, giving the meaning of the word "synthesis."

MR. PARRY'S DISTINCTION PRESSED

He also referred to Mr. Parry's evidence, in which he had said that "synthesis" meant the building up of a compound from its elements, either directly or indirectly, by orderly steps, the result of each of which could be accurately followed, and from which the constitution of the body could be deduced. He (Sir Arthur) pressed that, because it put the position absolutely. There was no possibility, in the process by which camphor was formed, of deducing the constitution of camphor. He asked the Referee to say that the meaning of the word, as given by Mr. Parry, was the one which, on the balance of the evidence, he would accept as the definition which ought to be used for the interpretation of the Act. If because there was no building up, nor was there any controlled reaction for telling the constitution of the body resulting. As to whether or not the substance was a chemical, he submitted that the definition of a chemical which had been given should not have had the word "or" included, but the word "and." It was inconceivable that a body was a chemical if it existed for no chemical purposes, but that was the meaning of the definition if the word "or" remained. The substance with which they were concerned was not produced for taking part in any chemical reaction. He submitted that the evidence was quite clear that camphor, either natural or artificial, was not obtained for the purpose of chemical reaction. After Sir Arthur had referred to books which had been put in, the Referee asked his opinion of Mr. had been put in, the Referee asked his opinion of Mr. Whitehead's contention that they must take the ordinary industrial meaning of the word "synthetic" as the equivalent of "artificial." Sir Arthur admitted that the man in the street probably regarded the word as meaning "artificial." They had heard of synthetic pearls, synthetic gold, etc., and no doubt the word in those cases meant "artificial." But that could not be the meaning of the word in the Act. In conclusion, Sir Arthur submitted that before the Act the term "synthetic organic chemical" was never used by chemists.

London Chamber of Commerce

THE fortieth annual report of the Council of the London Chamber of Commerce was submitted to the annual meeting of the members held last week. of the Perfumery Manufacturers' Section stated that the of the Pertumery Manufacturers' Section stated that the effect on the perfumery trade of the very high spirit duty, which, prior to the war, was 14s. 9d. per proof gallon, compared with the existing duty of 75s., was the subject of a deputation to H.M. Board of Customs during the year. Subsequently a petition, urging the necessity for some relief being given, was presented to the Chancellor of the Exchequer, on behalf of the trade, by Sir Allan Smith, M.P., but Sir Robert Horne intimated that he was unable to recede from the position which was taken by Mr. Chamberlain during the consideration of the Finance Act of 1921. It was felt that the Chancellor had failed to appreciate the view of the trade, particularly as the Section's amendment to the Finance Bill was withdrawn by Mr. J. D. Kiley, M.P., on the understanding that the Customs authorities would give favourable consideration to the complaints of the trade. The negotiations instituted by the Section, in conjunction with the British Essence Manufacturers' Association, with the Customs authorities, for facilities being granted for working in bond, both for the home and export trade, were continued during the year. In February, the Customs forwarded their observations on the trade's proposals, which they had not so far seen their way to accept, mainly owing to the alleged loss to the Exchequer, which it was suggested the concession would entail. The Board of Customs, however, intimated their willingness to consider further evidence or proposals which the trade might wish to adduce in support of their case. A memorial was drawn up and submitted to the Customs authorities, and a deputation was subsequently received by the chairman of the Board (Sir Horace Hamilton), who promised to take into consideration the representations made. The trade were requested to represent what their losses in spirit were during manufacture, and it was understood that in the event of representations being made jointly, as representing tincture makers, perfumers, and essence manufacturers, this question would be favourably considered. Steps were taken with a view to obtain the necessary details, and negotiations were proceeding at the end of the year. The notice of the Section was drawn to efforts which are being made to include in the Government legislation restrictions with regard to the import of synthetic organic chemicals, which included Import of synthetic organic chemical, materials used in the manufacture of perfumery articles.

Perpendiculations were made to the Board of Trade by Representations were made to the Board of correspondence and by deputation, intimating that the industry were strongly opposed to restrictions on the importation of their raw materials, especially in view of the difficulties of the trade, in consequence of the very high spirit duty. A joint conference also took place with the Association of British Chemical Manufacturers, with the object of exploring the situation, the outcome of this conference being that certain proposals were submitted to a special meeting of the Section. The Section, however, did not see its way to abandon its opposition, and Parliamentary action was taken with a view to the and Parliamentary action was taken with a view to the amendment of the Government Bill excluding the products used by the perfumery industry. Sir William Joynson-Hicks, Bt., M.P., took charge of the amendment submitted by the Section, but this, ultimately, was ruled out of order by the Chairman of Committees on a technicality. Further representations were made to the Parl of Trade by the theorem of the parl of the presentations where made to a technicality. Further representations were made to the Board of Trade, but the clause objected to was passed in its original form. Since the Act became operative the Section has actively associated itself with the steps which are being taken by the Chemical Users' Vigilance Committee for the protection of those industries adversely affected by the provisions of the Act. The Section also discussed and took necessary action in connection with the increased railway rates, trade-marks, exportation of perfunery, Australian Customs duties, pilferage, Proprietary Medicines Bill, use of methylated spirit in preparations for external use, etc.

New Books

Hewer, Mrs. J. Langton.—The Baby of To-day: First Principles in his Management. $7\frac{1}{4}$ in. \times $4\frac{3}{4}$ in. Pp. 24. 4d. John Wright & Sons, Ltd., Bristol. [Intended for the use of young women engaged in child-welfare work. The essentials of baby-minding are given.]

Strauss, Dr. R.—Impurities and Falsifications of Chemicals, their Determination and Recognition. $7\frac{3}{8}$ in. \times $4\frac{7}{8}$ in. Pp. 96. M. Bohlmann, Meissen, Saxony. [The characters of the various chemicals are given, with methods of testing. The English in which the book is written is faulty to obscurity.]

Hewer, Mrs. J. Langton.—Our Baby: For Mothers and Nurses. Seventeenth edition. $7\frac{1}{4}$ in. \times $4\frac{3}{4}$ in. Pp. 158. 2s. 6d. John Wright & Sons, Ltd., Bristol. [Gives correct information regarding the best methods of bringing up babies and of treating them in health and sickness. A useful book for sale by chemists.]

Notes on the Furnishing and Equipment of Chemical Laboratories. Pp. 11. The Chemical Society, Burlington House, London, W. 1. [A useful pamphlet, supplied gratis, giving details of the present practice and experience regarding the materials and methods of construction employed in equipping chemical laboratories.]

HAGUE RULES.—The following pamphlets have been published by E. Wilson, 10 Copthall Avenue, London, E.C. Harris, L. C.—The Hague Rules, 1921, discussed from the Business Side, 2s.; Cole, Sanford D.—The Hague Rules, 1921, Explained, 2s. 6d.; Jackson, A.E.—How the Hague Rules Affect Merchants, 2s. 6d.

Smith, A. Skene.—Compound Interest, as exemplified in the calculation of annuities, immediate and deferred, present values and amounts, insurance premiums, repayment of loans, capitalisation of rentals and incomes, etc., with annuity tables. $7\frac{1}{8}$ in. \times $4\frac{3}{4}$ in. Pp. 63. 1s. 6d. E. Wilson, 16 Copthall Avenue, London, E.C. [Explains the arithmetical methods of arriving at the cost of annuities, etc.]

Wilhelm, J.—Comprehensive Tables of Compound Interest on £1, £5, £25, £50, £75, and £100. Showing the accumulations year by year for fifty years at rates of interest from 1 per cent. to 5 per cent.; also tables of interest, rebate, discount, brokerage and commission from 1 per cent. to 5 per cent. on £1 to £100, in consecutive order. $4\frac{5}{8}$ in. \times $7\frac{1}{4}$ in. Pp. 112. 2s. 6d. E. Wilson, 16 Copthall Avenue, London, E.C.

Patterson, Austin M., Ph.D.—A French-English Dictionary for Chemists. 7½ in. by 4¾ in. Pp. 384. Limp covers. 18s. Chapman & Hall, Ltd., 11 Henrietta Street, London, W.C. 2. [A convenient dictionary of French chemical terms, including a large number of pharmaceutical words. It is well printed in distinct type, and is useful to those who read French technical literature and who find general dictionaries lacking.]

Friend, J. Newton.—The Chemistry of Combustion. $7\frac{3}{8}$ in. \times $4\frac{3}{4}$ in. Pp. 110. 4s. Gurney & Jackson, 33 Paternoster Row, London, E.C. [One of a series of chemical monographs edited by Dr. A. C. Cumming. Dr. Newton Friend is head of the chemistry department of the Birmingham Technical School, and wrote this book as the outcome of a series of lectures to his students. It deals with the combustion of solid carbon, gaseous hydrocarbons, and other gases, flame, ignition temperatures, propagation of flame in gaseous mixtures, and surface combustion. There is a bibliography at the end.]

Austen-Leigh, E. C.—A List of English Clubs in all Parts of the World for 1922. $4\frac{1}{4}$ in. \times $6\frac{1}{2}$ in. Pp. 188. 7s. 6d. Spottiswoode, Ballantyne & Co. Ltd., New Street Square, London, E.C. 4. [This book contains a list of 3,936 clubs frequented by English-speaking people in various parts of the world. It gives in tabular form particulars of every club included, such as the name of the secretary, subscription, date of establishment, and, sometimes, the objects for which the club was founded. There are 1,738 golf clubs, to which special attention has been given; this number includes 226 ladies' golf clubs.]



"Playing the Game"

SIR,—Your report of the Ealing and District Association meeting in the C. & D., April 29, p. 71, contains the following statement made by Mr. H. Skinner:

He [Mr. Skinner] was not at all well pleased with the Retail Pharmacists' Union, as they had not quite "played the game" with certain things in which he and they [the R.P.U.] had a mutual interest.

This is a serious charge, and I am writing on behalf of the Executive and members of the Union, upon whom this reflection is cast, to ask that Mr. Skinner should explain this statement, since he alone, so far as I can ascertain, is the only person who knows anything about this matter. The Retail Pharmacists' Union cannot, and will not, allow misleading statements of this kind to go unchallenged.

Yours faithfully,

G. A. Mallinson,
The Retail Pharmacists' Union. Secretary.

What was really stated in the C. & D. is as follows:

From the point of view of London, he was not at all pleased with the Retail Pharmacists' Union, as they had not quite "played the game" with certain things in which he and they had a mutual interest.

As the letter is a request to Mr. Skinner to explain this statement, "since he alone . . . is the only person who knows anything about this matter," we sent Mr. Mallinson's letter to Mr. Skinner, who replies as follows:

Many thanks for your letter enclosing that of Mr. Mallinson challenging my right to say that the Retail Pharmacists' Union from my point of view had not "played the game!" Doubtless you will notice that what I said is a personal expression of opinion, which, no matter what Mr. Mallinson may think, is a privilege common to all human beings in a free country. there is ground for the expression I submit the following reasons, which you may or may not think justify me in reiterating that the Ketail Pharmacists' Union, or some person or persons who have the power to mould their policy, have not "played the game" in regard to the "London Costing List." I acquit the rankers from the charge. On Friday, November 26, The Chemist and Druggist published the statement that it was going to issue a retail Price List on January 6, and about twelve o'clock on that day Mr. Mallinson rang me up on the telephone asking me whether I could see him at Tavistock Square on a matter of great importance. I saw him the same afternoon, when he placed the proposition before me that the Retail Pharmacists' Union should take over the London Costing List on the grounds that it was the best obtainable and that the Retail Pharmacists' Union wanted "nothing but the best." He called my attention to the Price List announcement in the C. & D., and expressed his determination to issue a list before January 6, and so forestall the \mathcal{C} . & \mathcal{D} . He also put the proposition before me that I should continue to edit That I declined, and told him that I did the list. not mind selling the list and giving such assistance as would set it going, but I did not wish to continue doing the work. I told him about our printing contract and what it entailed. He assured me that there was no copyright in the list, and he could send it down to their printer at Exeter and have it set up, and I should have no remedy. I agreed that there might be no copyright in a price list, but I demurred to the notion that they could use our list as the copy for their own. He told me that another party had offered very good terms, but frankly, the Retail Pharmacists' Union, from his point of view, should have ours. He asked me to let him have the terms of sale by the following Monday at the latest for submission to his Executive. This I promised to do. I afterwards found that there were differences between my collections. between my colleagues as to what the terms should be,

and as we had to conduct all the negotiations by telephone and telegraph (which cost us £3) I decided to write to Mr. Mallinson on the Sunday and offer to appoint a gentleman from our side to meet their chairman, and I informed Mr. Mallinson that whatever they decided upon I was willing to accept. Our representative was to be Mr. A. R. Keith, whom I had consulted. Mr. Mallinson received this letter by first post on the Monday morning. I 'phoned him later in the day, and he assured me that his chairman would be in later and he would let me know. I have never received an answer to that offer. I wrote on December 8 asking what had been done, and received in reply the following:

With reference to your note re price list, I am obtaining the authority of the Executive to send to every member during December, and possibly January also, a copy of the "British and Colonial Pharmacist" list, which is being supplied to us free of charge. We are not committed to the issue of this list, and when my Executive meet in January your offer and particulars of your list will be placed before them, and an alternative offer from the "British and Colonial Pharmacist," and any other offer that may arise in the meantime.

The list referred to was sent out, I believe, on December 28, or thereabouts, and was the issue of December 15, so that Mr. Mallinson fulfilled his intention of forestalling The Chemist and Druggist, but only with a stale price list. He goes on:

In regard to your figures showing the cost of publication of your list, you may be interested to know that I submitted the list as it stands to Townsends, of Exeter, and asked them to quote for publishing the list. The terms were, etc.

It will be seen that the question of copyright which he had mentioned to me led me to understand probably more than he intended, especially in view of what happened later. Continuing, Mr. Mallinson's letter stated:

You are, of course, free to defend your property in "The Script" in any way you like, but as the Executive have not definitely decided the matter one way or the other, and cannot do so until January next, you may think it wise to make your defence in terms which will not prejudice any chance of disposing of your System to the Executive, perhaps if not in January at a later period, when the disadvantages of your contract will not weigh so heavily.

It will be seen that it is now the System and not the list which is in question, but what relation the System had to a printing contract is not quite clear. I wrote in reply that it did not appear to mc quite fair that they should accept the free gift of the B. & C. P. list and then turn them down—to me that seemed committal. On December 13 Mr. Mallinson replied.

I can only reiterate what I have already said, and, further, I had rather the Union did not publish any list unless that list was the best available.

I was very guarded in my statement in "The Script," and awaited events. In March a friend sent me a copy of the list which the Retail Pharmacists' Union has fathered, and to my surprise I found that five pages of prices of proprietaries which I had innocently pointed out to Mr. Mallinson during our interview as exceedingly valuable to the chemist had been incorporated in the new issue. The lines protected by the Proprietary Articles Trade Association had been excised and a few additions made, for which we had not space in our list. It will be noticed that the method adopted in this portion is different from that in the other parts of the list. Moreover, the proprietaries list contains one or two typographical errors which had escaped notice in our own publication. I may be wrong in my surmise, but in view of what Mr. Mallinson told me about copyright and these five pages I feel that from my personal point of view someone has not "played the game." Who it is I do not know, but it appears to be someone who can mould the policy of the Retail Pharmacists' Union. I have not received any further communication.

Yours faithfully, HERBERT SKINNER.

16 Priory Gardens, London, N. 6.

Crystalline Glycerin

SIR,—I wonder how many of your readers have come across glycerin in a state of crystallisation? After thirty years in the drug-trade this is the first time I have ever seen it, and glycerin and drug travellers I have mentioned it to this last month have all remarked the same. Some weeks ago I had a 1-cwt. drum of glycerin delivered in the usual condition, and after putting up a few bottles and filling the shop stock-bottle I was surprised to find in a few days small crystals forming in all the bottles. After another few days the whole became solid, as did that in the drum also; I naturally wrote the makers, and their reply is as follows:

In reply to your letter of April 3, we would inform you that the freezing or crystallisation of glycerin is a phenomenon that is sometimes met with during the winter season. Nobody yet has been able to advance any theory to account for it, as although glycerin will not crystallise during hot weather, it is not proved that the cold is altogether responsible for the condition. If we wished to produce a crystal we could not so do, but if we had one tiny crystal, and we introduced it into a large tank of glycerin, the entire contents would become solid. The only fact that glycerin to freeze must be absolutely pure. The trouble is easily dispensed with on subjecting the glycerin to heat, but we can understand that this is not always convenient, and therefore we suggest that if there is any of the glycerin still remaining in the drum, you return it to us and we shall be pleased to replace it. It is necessary for us to exercise the very greatest care in cleaning out drums which have once contained frozen glycerin, for, as already mentioned, if one crystal remains, the glycerin which is again filled into the drum will in turn become frozen. So far as the bottles you have filled are concerned, if you will place these near a fire you will soon find the crystals disappear.

Yours truly,

Pontefract.

A. Collins, M.P.S.

War Auxiliary Benevolent Fund

SIR,—As Mr. Parry has thought fit, in the "Pharmaceutical Journal." to make a somewhat violent attack upon myself for having the "temerity" to act as the spokesman of the East Anglian Federation in criticising the policy of the War Auxiliary Benevolent Fund administration, and as the editor of that journal does not permit me to reply, will you allow me to state that his insinuations as to my motives are entirely baseless? Our criticism is not so much founded on cases of illiberal treatment of individual ex-Service men (though such cases have occurred, and have been referred to by members of the Council themselves) as on the indisputable fact that the money subscribed on behalf of the ex-Service men remains practically intact. Those who subscribed and worked for the Fund can scarcely be pleased with the Committee's avowed policy of "conserving" the Fund and their apparent reluctance to touch the capital at all.

Ipswich.

Yours, etc., John C. Wiggin.

Labelling Liniments

SIR,—Referring to the coroner's remark made at an inquest held recently at Wallasey that the bottle containing belladoma liniment should have been labelled "Poison" by the chemist who supplied it, I should like to know the prevailing view of dispensers on this point. The custom at a leading pharmacy in which I have been engaged was to dispense all liniments (whether poisonous or not) in blue bottles and all lotions in green fluted hexagonal bottles, embossed with the words "Not to be taken." To avoid frightening nervous patients "Poison" labels were not used, except when the prescription was marked "Sig. 'Poison.'" The direction label was white, with a deep red margin, and at the top, on a black ground, was printed in white "For outward use only." Liquid preparations of iodine (e.g., pigmenta) were dispensed in square squat blue stoppered bottles. The abnormal dread of some people of taking medicine containing a poison was impressed on me by the following occurrence: An elderly lady handed in a prescription for a mixture, and the assistant attending her grasped a shop-round which had upon it a large "Poison" label, and proceeded to measure out one of

the prescription ingredients. The observant lady hastily demanded the return of the prescription, and, to the amazement of the assistant, promptly left the pharmacy, remarking that she would not take the medicine if it Faithfully yours, contained a poison.

H. CORBETT MEYRICK, Ph.C. Liverpool.

Shop Hours

SIR,-Will you kindly lend us your columns to invite the co-operation of those chemists who, like ourselves and thirty-one others in this area, cater for the stranger within our gates, to approach the County Council with the object of rescinding the weekly half-day closing? No one appreciates early closing in the suburbs more than we do ourselves, but in a neighbourhood like Coventry Street, where the people who pass your shop come from all parts of the world, it is folly to do anything that will curtail business. If we are open to sell everything that a chemist normally sells it will mean a brighter London for a visitor, the employment of more assistants, and great convenience to the travelling public.

Yours truly, T. Morgan Davis, for J. M. Davis & Sons, Ltd.

Coventry Street, London, W.

Insurance Dispensing

SIR,—Another chemist has been cautioned for supplying an eight-ounce mixture where a twelve-ounce bottle was prescribed (C. & D., May 6, p. 63), although he had marked the prescription accordingly. It is all very well for committees to sit in a comfortable committee-room and censure pharmacists for this sort of thing, but it is a totally different matter to face an awkward customer over the counter, and in some poor and thicklypopulated areas they can be very disagreeable indeed at times. A certain class of panel customer flatly refuses to pay for a larger bottle. They bring some odd bottle, and when informed that it will not do and they will have to pay a deposit on a larger one, the answer is nearly always "Oh! fill that one up. I am not going to pay anything; bottles ought to be supplied with the medicine." Now, according to the ruling of this Committee, the chemist will have no option but to refuse to dispense the mixture for such a customer, when there will certainly be more trouble. This is one of those troublesome details which seem insignificant to read about, but which become extremely annoying when they occur, as they generally do, at a busy time with a shop full of customers, and it is a matter which the Retail Pharmacists' Union might take up, and get a ruling from the Ministry of Healt's that where a customer refuses to pay the deposit the chemist can notify the same on the prescription.

Yours faithfully, MARK SCRIFT (9/5).

Legal Queries

Ajax (3/5) owns cottage property in respect of which a notice requiring the execution of repairs was recently served upon his agent by the local council. The agent failed to advise "Ajax" of the notice, and the specified time having elapsed the council carried out the repairs, sending him an account amounting to over £100 for the work done. Subsequently the council took proceedings in the County Court to recover the amount, and upon receipt of the summons "Ajax" paid the sum claimed into Court. He is now informed that the hearing of the action has been adjourned sine die; is he entitled to have his money returned in the meantime? ["Ajax" can apply to the judge for the return of the money; but in all probability the judge would direct that the sum must remain in Court pending the result of the action.]

Chemist (217/6) is a yearly tenant of a house and shop in the country at an annual rent of £25, the landlord paying all rates except the water rate. "Chemist" would like a lease of the property, and the landlord is willing to grant one, but says he cannot legally do so unless the lease states that the tenant pays all the rates as well as the rent. Is this correct? [A lease which throws the liability for rates upon the landlord is perfectly valid, and in the absence of such a clause the tenant would have to pay all the rates, subject to the restrictions of the Increase of Rent Act, 1920. If, however, under the proposed lease the landlord agrees to pay the rates, but wishes to pass on to "Chemist" the difference between the pre-war rates and those charged to day, as allowed by the Act, this should be expressed in the lease. We advise the parties to engage a solicitor.

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyre and report upon proprietary ar icles nor to publish supposed formulas for them.

F. A. G. (10/4).—ELECTRO-PLATING.—For silver-plating the bath consists of potassium silver cyanide prepared by precipitating a solution of silver nitrate with potassium cyanide and redissolving the precipitate in excess of potassium cyanide. The strength of the solution is as follows:

... 12 oz. ... 1 gal. Potassium cyanide ...

About 1 oz. of silver cyanide is required. In addition a whitening bath is required consisting of:

Potassium cyanide 1 lb. Water 1 gal. Water ... Water Silver cyanide ...

The baths are fitted with silver plates as anodes, and the articles to be plated (previously cleaned) are connected by copper wire with the zinc pole of the battery and dipped in the "whitening bath" until uniformly coated with a white film of silver. The articles are then transferred to the plating bath, using three or four Smee cells as the source of the electricity. From twenty to thirty minutes is needed for plating, but there are many pitfalls for the novice in the electro-plating process.

W. G. (1/5).—Acetone Hair-Wash.—The following is from "Pharmaceutical Formulas"

Oil of sweet almonds ... 5iv. Solution of ammonia ziij. Acetone ъiij. Tincture of cantharides зvj. Eau de Cologne Eau de Cologne ... Distilled water to ... ziv.

Mix the oil with a little of the water, and emulsify by adding the ammonia. Then add more water, the acetone, tincture, and perfume, finally making up to

Retrospect of Fifty Years Ago

Reprinted from "The Chemist and Druggist," May 15, 1872

Carbolic Acid Test

Carbolic Acid Test

Mr. T. N. R. Morson writes: "The value of the wood creosote of Reichenbach as a remedial agent, and its employment in the preservation of articles used as food, has been fully proved during the forty years we have been manufacturers of this article. Of late years its reputation has suffered from the substitution of carbolic or phenic acid for it; and as no good test to distinguish these bodies has been published (and those of our Pharmacopæia are for this purpose useless), I shall feel obliged by your publishing a very simple means for distinguishing these two bodies, which my son, Mr. Thos. Morson, has discovered in making some experiments on adulterated samples recently submitted to us. This test is glycerine, in which true creosote is insoluble, or nearly so. Carbolic acid, on the contrary, dissolves in all proportions, and any large amount of this latter substance, if mixed with true creosote, will render the creosote soluble. The danger of substituting carbolic acid for creosote, to be used internally or for food, is well known. To test a suspected sample, mix it with an equal quantity of pure glycerine: if they unite and make a clear solution, the substance is carbolic acid, or in greater part consists of it."

That seems to us to be the only practical way of helping business now. "Quin-Quenna" time is upon us, and if we show it well sales must be ours. The display we have cost many shillings to produce, and represents a high grade design in six shades of sepia. It has centre and two side wings, the latter showing on swingback mirror contrivances the "before" and "after" effects of "Quin-Quenna." Nevertheless, costly as it is, we are giving

"QUIN-QUENNA" GIRL DISPLAY

to any chemist who will send order for one six dozen decorated carton (and one dozen bonus) at 48/- per gross, and guarantee displaying the "Quin-Quenna" Girl for fourteen days. This, with the Press, seems to us not only a practical, but a certain way of lending the hand that leads to immediate and profitable business.

COSTS 4/- PER DOZEN.

SELLS AT 6d. P.A.T.A

Write "Sepia" on postcard with Name and Address, and it will be understood here that you accept suggested order of a Six dozen Carton and Bonus, and will guarantee a fourteen day show of the "Quin-Quenna" Girl Positively this offer connot be continued indefinitely, and is only available while the supply of shows is at our commond,

THOS. CHRISTY & CO.,

Get postcard, address it to us, write on reverse the word

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sign, and give full address This will be the token of your acceptance of above offer.

4/12 Old Swan Lane, E.C. 4.

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Each 'a well-fil'ed Glass Tube, enclosed in handsome embossed protective aluminium pocket case with dainty green and white band—6 displayed in small compact businessinducing show-outer-just ideal for the counter.

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Most Chemists know the 1/6 "Cushman" and recall the many times they have automatically sold it in increasing quantities year by year, at all seasons. To-day sales are even more easy with its new and improved get-up.

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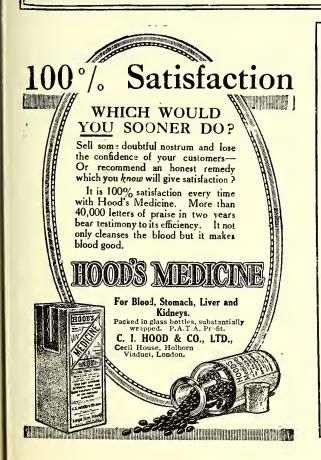
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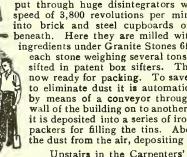
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A visit to the store rooms will give an idea of the huge quantity of materials required. Of one of the principle ingredients-Strammonium-the stock (a visible mountain of bales) is never less than 20 tons. On the arrival of the new crop in the Autumn this is very much more. Only genuine Datura Strammonium and Datura Tatula of high alkaloidal value is allowed to enter Withered or old stock and the so-called Spanish or False Strammonium is rigidly excluded, Each bale is passed by an expert before use. fumes of Strammonium when burnt are apt to cause headache, but the

additional herbs used in POTTER'S ASTHMA CURE counteract this. These herbs are first put through huge disintegrators working at a speed of 3,800 revolutions per minute, falling into brick and steel cupboards on the floor beneath. Here they are milled with the other ingredients under Granite Stones 6ft. 6in. high,

each stone weighing several tons, and finally sifted in patent box sifters. The powder is now ready for packing. To save labour and to eliminate dust it is automatically carried by means of a conveyor through the main wall of the building on to another floor where

it is deposited into a series of iron-lined trunks. These are wheeled to the packers for filling the tins. Above the packers' heads, electric fans draw the dust from the air, depositing it in a canvas balloon.

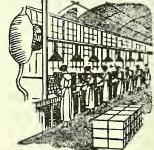


Upstairs in the Carpenters' shop the familiar 1 gross cases are being made and branded. In the printing room, we see labels being printed in English, French,

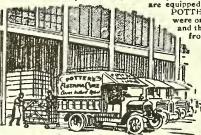
Dutch and Flemish. A considerable trade is also done with customers' own name, and several popular brands throughout the world are packed here also. In the manufacture of POTTER'S ASTHMA CIG-ARETTES and POTTER'S ASTHMA SMOKING MIXTURE it is necessary to remove all stalk from the herbs. After many years of patient experiments the firm have designed machines to do this, and it is interesting to watch the stalks being ejected from one end whilst the leaves rubbed to the required fineness drop into the cupboard below.

It will be noted the great precautions taken against fire. Concrete floors, iron indow frames, iron doors, and a complete service of Fire Hydrants and extinguishers are equipped thin is model factory.

POTTER'S ASTHMA CURB and preparations were one of the first to be placed upon the P.A.T.A., and there is no doubt that its success is due, apart



The Packing Department showing Dust Extractors.



Milling under Granite Stones.

Motor Vans loading for delivery to all parts of the country.

from its medicinal value, to the friendly co-opera-tion of the retailer.

MANUFACTURING CHEMISTS

60, 62, 64, Artillery Lane, LONDON, E.1 and at 24, Luna Street, Great Ancoats, MANCHESTER.

TER'S ASTHMA CURE GIVES INSTANT RELIEF

SULPHUR

A Sample, which is ready and only waiting your Name and Address, will convince you o f their superiority in both flavour and finish.

112-lb. 56-lb. 28-lb. 1/2

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ORANGE FLAVOURED

HOUGH, HOSEASON & CO. LTD.
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LINSEED OIL. TURPENTINE.

FINE OLIVE OILS.

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CHEMICALS. DRYSALTERY.

PETROLEUM JELLY.

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PRICES ON APPLICATION.

TELEGRAMS.—

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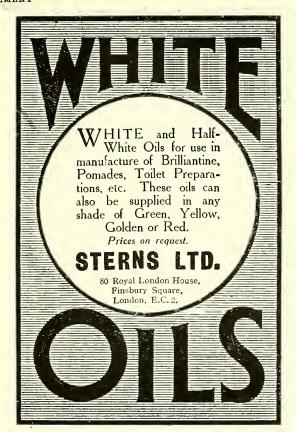
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Telephone: Putney 42.

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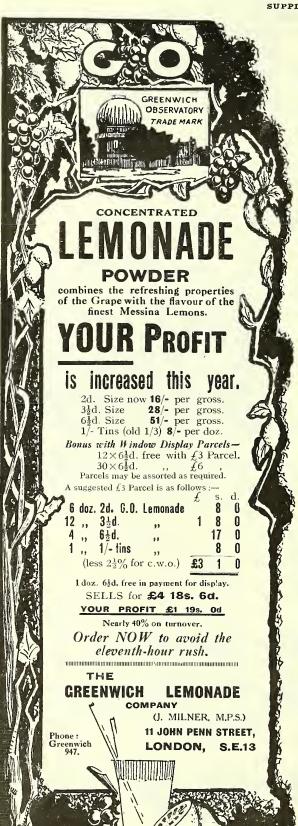
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SEITZ **ASBESTOS FILTERS**

For Pharmaceutical Purposes.

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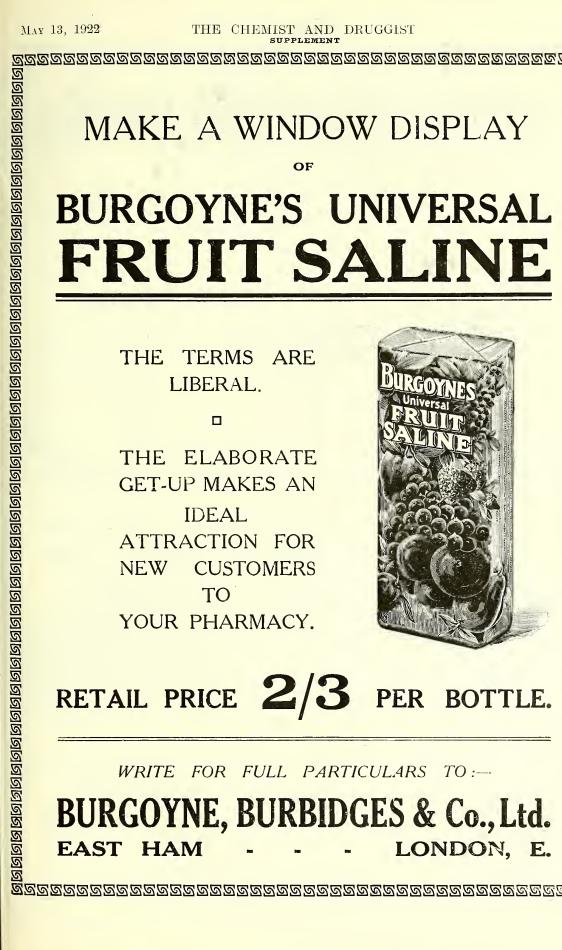
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HOOKER'S Malted Milk is absolutely unrestricted in its appeal. Its perfect nutriment (that of Full-cream ENGLISH MILK and Malted Cereals) satisfies every dietary need, whether of infants or invalids, childhood or adolescence, adult or aged life; whilst its alluring milk-malt flavour creates the appetite for its enjoyment. And as the accompanying analysis reveals, its prompt and complete digestive assimilation is scientifically assured.

The call for HOOKER'S Malted Milk may come from any family or any individual at any time. Once enjoyed it is frequently taken, and honest recommenda-tion enlarges its sphere. To stock HOOKER'S, therefore, is to invite regular custom-custom which brings adequate and easily earned profit. And that on a preparation which even the most exclusive Pharmacist can handle with professional

> Showcards and other advertising material gratis on request.



Proprietors: Thew, Hooker & Gilbey, Ltd., Buckingham.

"Lancet" Analysis of HOOKER'S Malted

Maltose and Lactose Protein Mineral Salts

100'00



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To introduce Zomogen without any possible risk to yourself, we undertake to huy back from you any hottles of Zomogen unsold six months after you have ordered them, and to buy them back at the price you pald, without any deduction whatever.

Send us your order to-day, and you will find that Zomogen is one of the best selling and most profitable lines you can handle.

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Zomogen has rapidly proved its exceptional value as a tonic, restorative food for all cases of debility and blood impoverishment,

Experience shows that Zomogen is far more effective than any preparation of metallic iron, because it contains iron in the natural state in which it is present in the red blood corpuscles. In this form it is easily assimilated, and will not irritate the most delicate stomach.

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We would emphasise the fact that Zomogen is British throughout.



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Wholesale Distributors: J. C. GAMBLES & Co., 49, Farringdon Street. London. E.C.4. Also J. & J. HASLETT, Ltd., North Street. Belfast.



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The Supreme Milk

RUFOOD is the solids of pure fresh Cheshire milk dehydrated by a process which causes no separation of fat, no coagulation of lactalbumen, and which preserves the vitamines. It dissolves completely in hot or cold water. These advantages make it

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TRUFOOD CONTAINS NO STARCH OR OTHER MATTER FOREIGN TO MILK.

Made at The Creameries, Wrenbury, Cheshire, by PRICE

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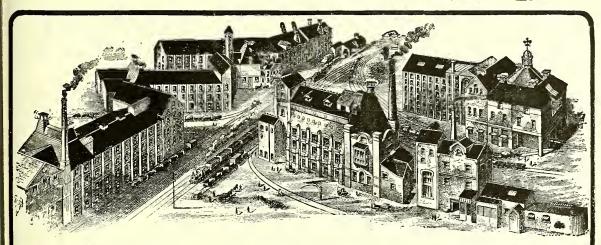
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 Price to Public
 Small Orders of £6 Net
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 10 ozs.
 2/9 (33/- per dozen)
 25/5
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The superiority of the Nestlé Feeding Bottle is so obvious that doctors are advising it, nurses are recommending it and mothers insist on having it. Nothing is good enough for their little ones but a bottle which is perfect in hygienic construction; which cannot possibly harbour dirt or disease germs and which ensures that the food is taken without undue effort or excessive air.

Nestle's Feeding Bottle is constructed throughout on scientific principles, it is impossible for the child to detach the teat and rubber valve which automatically cling and are made from pure plantation rubber. Colic is prevented because the flow of air behind the milk is systematically regulated. The feeder, made of virgin glass, can be tilted to and will remain at any desired angle. Its capacity is 10-oz., and every part, including the box, is thoroughly sterilized before leaving the factory.

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"The Kute" fits any wrist You get elastic support You get rigid support You get ross-section support You get cross-section support You get close all-round fitting effect You get what force you require

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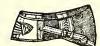
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A discount of 5 per cent. f satisfactory. Write for P particulars of our well-kn	gs, assorted colors	urned if goods are not es, etc., containing full Water Bottles, etc., etc.

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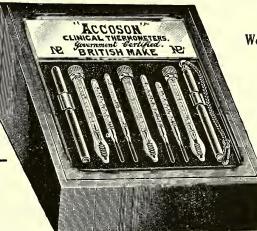
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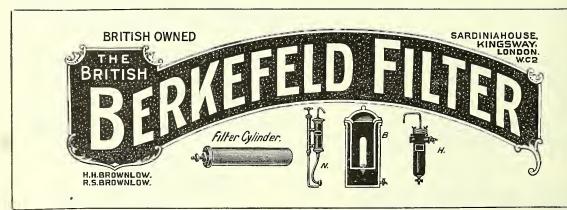
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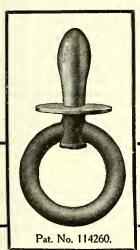


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It is without taste or smell; it is practically indestructible, and the shield is guaranteed not to pull off with ordinary use. The most perfectly made all-rubber soother ever offered for sale.



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The square mark engraved on lens front locates the Mercury column immediately. SPECIAL AWARD AND GOLD MEDAL. NEW ZEALAND, 1907
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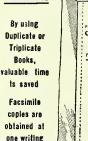
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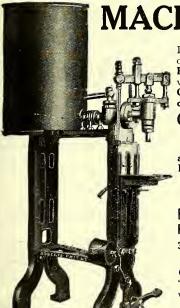
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Don't waste money on imitations, buy Roberts' Machines which actually Created the Records for

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Laboratory Fittings and Equipment.

SPECIALITIES: Benches, Fume Cupboards, Stills, Prying Ovens, Gas, Water and Steam Fittings Electrically Heated Apparatus.

Quotations submitted for the complete equipment and installation of apparatus and plant for Educational Research and Commercial Laboratories. Lists Free.

Stills, as illustrated, for gas and steam heating, made in sizes from 1 to 12 galls, per hour. Prices on application.

BROWN & SON,

ALEMBIC WORKS,
WEDMORE STREET, HOLLOWAY,
LONDON, N. 19.

"ATLAS" PATENT

MIXERS & SIFTERS

Combined or Separate Machines.



UNEQUALLED FOR EFFICIENCY AND DURABILITY.

Various sizes for hand or power.

BALL MILLS GRINDERS DRYERS

HIND & LUND, LTD.,

S WORKS, PRESTON.
Established 1791.

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PURE ORANGE R & CO., LTD.,

RANTII B.P.) Prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only.) Samples from Head Office, Thomas Street, DUBLIN, or London Office, 43 Great Tower Street, LONDON, E.C. 3.



This is an example of our advertising in the most widely read high class weeklies, reaching hundreds reaching hunds of thousands potential users of the "Watts" Blades.

Our desire is to supply these superquality Blades through the "trade."

Will you co-operate on a 33½ % profit basis?

stock opening order will enable you to benefit at once by our advertising.



3/6 Per doz. Dept. 3, Lambert Works, SHEFFIELD. LONDON: 24 Redcross St., E.C. 1.

Est. over 150 years

FREDK. FINK & CO.,

10 & 11 MINCING LANE, LONDON, E.C.3. SPECIALITIES.—Gums Arabic and Tragacanth as Imported or finely powdered.

ALL CHEMISTS SHOULD STOCK

THE GOLD MEDAL FRUIT DRINK.

Quick Seller. Big Profits. Over 40 years' Reputation.

"Abdine" is the most popular Health Drink, superior to all Mineral
Waters. The Original and only genuine Fruit Drink.
Reduced Price List can be had on application.

DUNCAN McGLASHAN, LTD., ABDINE WORKS, WESTFIELD ROAD, EDINBURGN.

Synthetic 15/- oz.

OTTO ROSE

AS GOOD AS VIRGIN OTTO.

Write for Samples.

LEE & SILVERWOOD, 24a FOUNTAIN ROAD, HULL.

Synthetic 7/6 oz.

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AN EFFECTIVE BASE FOR EAU DE COLOGNE.

PUFFS of ALL KINDS in DOWN and WOOL. SOLID FACE POWDERS

COMPLETE WITH PUFFS.

Inquiries invited by makers, F. SCHUTZE & CO., Ltd. BLACK BULL WORKS, Caledonian Market, London, N.7.

CHICAGO HAIR DYE

Do you know where to obtain?

MADE IN FIVE SHADES.

SINGLE, DALBY & CO., Proprietors: 42 Oldham Rd., Manchester.

FOR COLOURING GREY HAIR

This popular article is largely advertised and stocked by all Wholesale Houses.
Trial Size 8d., per post 1d. 1/4 size, per post 4/6; 2/6 size, per post 2/11; 3/9 size, per post 4/6; 8d size, 6/. doz.; 1/4 size 12/. dox.; 2/6 size, 24/. doz.; 3/9 size, 86/. doz.
THE SHADEINE CO., 58 WESTBOURNE CROVE, LONDON, W.

A NEW LINE creating New Revenue.

LAGOON "SPONGE LIFE."

A New COLD WATER Process for cleaning Sponges. Shows Good Profit. A Proved Repeater. Sells on Sight. 3 doz. cost 11/3 post free Sells at 6d. Apply for free Showcard with 1 packet attached.

The BUXTON HOT-SPRING SALTS Co., 4 Cavendish Circus, BUXTON.

ART OF DISPENSING. (9th Edit.) 8/-, by post 8/9. VETERINARY COUNTER PRACTICE. 7/6, by post 8/3.

CHEMIST'S DICTIONARY OF MEDICAL TERMS. 3/6, by post 3/10.

The CHEMIST & DRUGGIST, 42 Cannon Street, E.C.4

BRITISH MADE, ROUND AND SQUARE В CARDBOARD BOXES 0

PILLS, POWDERS, SOAP, OINTMENT, BOTTLES & CHEMISTS' ADJUNCTS. Estd. 1850. Wholesale & Export only Phone: 2505 Royal. JAMES AUSTIN Ltd. 32 GREAT GEORGE SQUARE, LIVERPOOL.

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Chemists who pride themselves on the elegant way they put out their pharmaceuticals in Cachet form should write for samples, price, and full particulars to— THOS. CHRISTY & CO., 4/12 Old Swan Lane, E.C. 4. Our Speciality for many years. No finer quality obtainable anywhere. Write to-day.



Medicals (plain and graduated), Flat Dispensing, Panel Flats, Poisons, Limes, Kalis, Emulsions, Tobins, Vials, Tablets, &c. &c.

MANUFACTURED BY-

Phone: Dalston 1456.

Highest Quality in WHITE FLINT, ACTINIC GREEN. PALE GREEN. AMBER, BLUE.

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NOTICE

Lettered Bottles a speciality.

in medical tint, plain or graduated, 4 oz. 12/6; 6 oz. 15/-; 8 oz. 17/-. Bottles, jars, and chemical glassware of every description.

UNIVERSAL GLASS COMPANY, LTD., 66 Victoria Street, London, S.W. 1.

BOTTLES.

I solicit your enquiries for MEDICAL FLATS in all sizes, plain and graduated, MEXICANS, POISONS, KALIS, LIMES, VIALS, CANNONS, OVALS, BRILLIANTINES, in all shapes, SCREW JARS, TABLET BOTTLES, etc. etc. All bottles used in perfumery and chemist trades. Special shapes made. Wholesale quantities only.

G. VAN DER HOEK, 324/5 Bank Chambers, 329 High Holborn, LONDON, W.C. 1:





GLASS

Medical Flats, Panels, Vials, Poisons. Kalis, Limes and Feeders.

Wholesale and Export.

Samples and Prices on Application.

FARROW & CO., 87 Borough High St., LONDON, S.E.1.



BOOKS for PHARMACISTS.



HOW TO MAKE SHOW CARDS.

A practical treatise on the fundamental principles of artistic lettering witb pen and brush for the use of retail merchants and their clerke, by Charles A. Miller. Fully illustrated with diagrams, alphabets, sample eigns, etc. One of the handsomest and most useful books on the subject published. 2nd edition, 120 pagee. 5s.; with SPATULA 1 yr., 9e.

COMPENDIUM PEN LETTERING AND DESIGNS.

Contains 100 pages 73 × 103 illustrating 148 plates of Commercial Pen Alphabets, Designs, Show Card Layouts, Corners, Show Card Layouts, Corners, Show Card Layouts, Corners, etc., Advertising Phrases. Has colour plates showing a variety of attractive colour effects. Cover in 3 colours and gold. 7s.; with SPATULA 1 yr. 1ls.

MODERN SHOW CARD LETTERING.

By W. A. Thompson A practical treatise on up-to-date pen and brush lettering with numerous illustrations of large and small letters of each alphabet. A common sense book with no absurd theories. Over 150 illustrations of finished show cards and 2,000 phrases for cards. 5e.; with SPATULA

DRUGGISTS' PRACTICAL SHOW CARD INSTRUCTOR.

By W. A. Thompson, gives a practical course of instruction in lettering and designing necessary for making all styles of show carde and price tickets required by the up-to-date druggist and soda fountain dispenser. The exercises and alphabets are fully illustrated. A profitable book worth many times its price. 4s.; with SPATULA 1 yr., 8s.

SPATULA LABEL BOOK.

For shop use, comprising labels for practically all the Drugs, Chemicals and Preparations in the Pharmacopœias, and for a large number of unofficial articles, utensils, apparatus, etc.; over 2,000 labels. 5s.; with SPATULA 1 yr., 9s.

PRODUCTIVE ADVERTISING.

By Herbert W. Hess, Ph.G. A book of inestimable value to anyone in any way connected with the problems of productive advertising, the kind that yields the biggest possible return for the least possible expense in the quickest possible time. 23 long chapters, covering every phase of the game. 360 pages. 85 charts, diagrams and illustrations, buckram binding. 17s.; with SPATULA 1 yr., 20s.

SPATULA SODA WATER GUIDE and Book of Formulas for eoda water dispensers. A compilation of formulas and information for the manufacture and dispensing of etill and carbonated drinks, sundaes and ice cream, with instructions for the making of syrups and the management of luncheonettes. By E. F. White. Fifth edition, enlarged and brought thoroughly up-to-date. 196 double column pages, 10×7;. 7s.; with SPATULA 1 yr., 1le,

WHITE'S VEST POCKET SUNDAE FORMULARY.

A collection of original and standard formulas for plain and fancy sundaes and dressings, arranged alphabetically over 1,500 formulas. By E. F. White. 200 pages, only 3×3 inches, made purposely to be carried in the vest pocket. 5s.; with SPATULA 1 yr., 9s.

METRIC SYSTEM FOR DRUGGISTS.

By Chas. O'Connor. Makes the metric system in relation to pharmacy as simple as dollars and cents, written especially for clerks. The eimplest and most practical treatise upon the subject obtainable. 2s.; with SPATULA 1 yr. 6s.

WATCH FOR ANOTHER LIST OF BOOKS-WEEK AFTER NEXT.

Send for FREE Sample Copy of THE SPATULA, the wonder-working international drug journal, full of American vim and push, and a 32-page illustrated catalogue of Pharmaceutical Books.

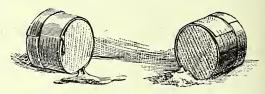
(Cheques on local banks in Great Britain accepted. Make Money Orders payable to IRVING P. FOX, Treasurer.)

The SPATULA, 14, Boston, Mass.

"Corruganza" SEAMLESS **OINTMENT BOXES**

Have replaced the old "Willow" boxes-Greaseproof—the bottoms cannot fall out.

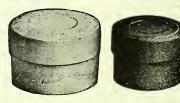
GERMAN "WILLOW" BOXES are again being offered at lower prices, but these boxes will not hold Powders, nor, in warm weather, Ointments.



THEY ARE DEAR AT ANY PRICE.

Stick to the ONE-PIECE principle

"Corruganza" SEAMLESS PILL BOXES.



THE phenomenal success of the "Corruganza" Seamless Ointment Boxes has induced us to offer a series of Pill Boxes made on the same One-Piece principle. Stocked in usual sizes.

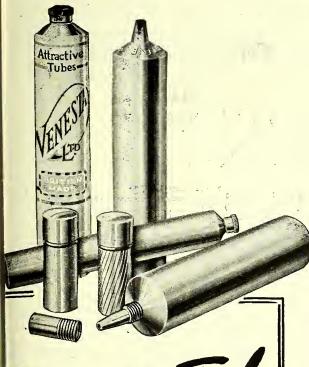
They cost a little more than the Ring and Disc style, but THEY HOLD THE GOODS, and do rot fall to pieces in handling or in the pocket.

Wholesale or Export only from

HUGH STEVENSON & SONS.

Summerstown Works, London, S.W. 17

And at Manchester, Birmingham, Leith, Perth & Glasgow. Kindly mention this Journal when replying to the advertisement.



Genesta Tubes

When ordering your next supply of tubes remember that Venesta collapsible tubes possess a quality and finish that make them a real selling force.

They are made from Pure Tin, Lead or Lead-coated with Tin and supplied plain or enamelled and printed with designs to suit customers' own requirements.

We also supply Lip-salve Cases, Sprinklers, etc., and shall be pleased to forward illustrated lists, samples and current prices on application to—

G. Dept.

VENESTA LTD.

1 Great Tower Street, London, E.C.3.

Actual Manufacturers of TINFOII.

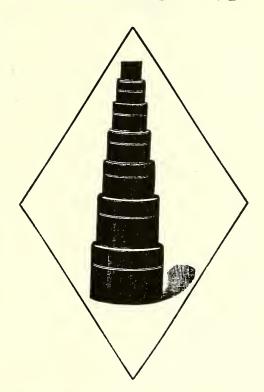
Plain, coloured and embossed in any size, gauge or shape.

MENTION

ROBINSONS' MAKE

WHEN ORDERING FROM YOUR WHOLESALE HOUSE YOUR NEXT SUPPLY OF

PILL BOXES



BRITISH MADE BY BRITISH LABOUR.

SUPPORT HOME INDUSTRIES.

ROBINSON & SONS, LTD.

BOXMAKERS TO THE CHEMIST TRADE

CHESTERFIELD.

ENLARGEMENTS **RE-TOUCHING**

JEVELOPING & PRINTING

នីរាយរយារយាយនេះបាយមាយមាយរយារយារយារយារយារយារយារការយារកិ OUR SLOGAN IS PROMPT SERVICE.

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EXPRESS DEVELOPING CO.,

296 High Road, STREATHAM, S.W. 16.

គឺរាយរយៈរយៈពេលខែប្រភពការប្រភពពលការប្រភពពលការប្រភពពលការប្រភពពេលការប្រភព MINIATURES IN BLACK AND WHITE, SEPIA OR WATER-COLOURS.

Send us your Plates & Films.

Prompt Delivery. Best Workmanship.

Metropole Studios, The Hayes, Cardiff.

NO CHARGE FOR FAILURES.

Send your FILMS and PLATES to

FOTOCO, LIMITED

For Developing. Printing and Enlarging. Quick Service. Write for List and Terms. AGENTS WANTED FOTOCO, Ltd., 5 Red Lion Sq., LONDON, W.C. 1

DEVELOPING & PRINTING

CHEAPEST & BEST. 24 HOURS' SERVICE.

Printing

Developing Roll Films

All sizes up to-All sizes up to-

 $3\frac{1}{2} \times 3\frac{1}{2}$ 1/2 per doz. $4\frac{1}{2} \times 2\frac{3}{4}$ 1/5 ,, 1-plate, 6 or 8 exposures, 4d. Postcard and 5×4 ... 5d. $4\frac{1}{2} \times 2\frac{3}{4}$ 1/5 $\frac{1}{2}$ -plate and 7×5 ... 8d. $\frac{1}{4}$ -plate 1/8

12 exposures, 50 % extra Postcard ... 1/11

POSTCARD ENLARGEMENTS

1 dozen from the same negative-Sepia, per doz., 3/-B. and W., per doz., 2/-

SHAWYER & CO., SWINDON, WILTS.

DEVELOPING, PRINTING & ENLARGING

for Chemists by Chemists. 24 hours' service. During busy period of 1921 we never let our clients down.

Order books, showcards, etc., supplied; list free.

FORBEST Ltd., Broughty Ferry, DUNDEE.

The UNSURPASSABLE AND INCOMPARABLE RAZOR, "SILVER-KING" Brand.

WHOLESALE ONLY.

ADOLPHE SEGALLA, Sole Agent: 12 Alexander Street, Bayswater, London, W. 2.

Write for Sample.

AND P.

the LIVE KODAK DEALER. Same Day Return-Finest Results. PRICES RIGHT-PROFITS RIGHT. Write for Lists to

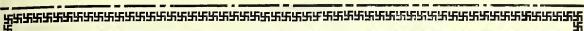
WALLACE HEATON, LTD. Change Alley - SHEFFIELD

Developrint

THE DEALER'S SERVICE

Spools developed, perfectly printed, and posted back same day. Enlargements three days. Send trade card for descriptive pamphlet and price list, mentioning "Chemist & Druggist."





Used with success for years by millions of British Ladies.

HAVE GREATLY EN-LARGED THE BOTTLE, and CAN GIVE **IMMEDIATE** DELIVERY of ALL COLOURS EITHER DULL GLOSSY SERIES.

Very attractive Showmatter supplied including Counter Showcases.

(A Special Non-Inflammable Series is supplied for Expo.t.)



"always a success"

Ladies everywhere praise these simple and beautiful dyes. They retail at 6d. per packet and show at least 50% profit on outlay.

WRITE TO-DAY for latest patterns and price lists of "LUTON" Hat Dves, "AURORAL" Cold Water Dyes, Whitaker's Fabric Dyes, Gold Paint, Varnish

Stains, Black Lacquer, etc. etc.

MANUFACTURERS :

Luton Dye Works, KENDAL.

Telegrams: "DULLETTE KENDAL."

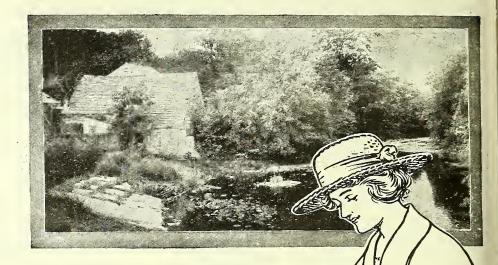
LONDON OFFICE & SHOWROOMS: 61 & 62 Craven House, Kingsway, W.C.2

Established 1878.

Telephone: GERRARD 1774

Our Products are of entirely British Origin and Manufacture.

Our unique...
Photographic...
Advertising...
Matter attracts
profitable...
custom and...
compels trade



Photography

will give you good returns if you get to business in the right manner. We have a varied assortment of

Booklets, Leaflets,
Folders, Wallets,
Window Bills,
Wrappers, &c., &c.

Write for Samples-

Thomas Waide & Sons Ltd. Leeds



WARNING!

It has come to our knowledge that Tooth Brushes are being offered to the Retail trade by a firm in Vienna on the understanding that they are genuine "KOH-I-NOOR" TOOTH BRUSHES, which is not the case.

We wish to inform the trade that the word "KOH-I-NOOR" as applied to Tooth Brushes is our registered property, and that the above is a direct infringement of our rights.

It is important to note that on 15th February, 1921, in the High Court, Chancery Division, Mr. Justice Peterson granted an injunction against a London Firm for selling as "Koh-i-Noor" Tooth Brushes spurious imitations.

Anybody having purchased Tooth Brushes stamped "Koh-i-Noor" but marked otherwise than as mentioned hereunder, is requested to communicate with the Proprietors of the "KOH-I-NOOR" Brushes through the medium of *The Chemist & Druggist*.

The Proprietors of the

"KOH-I-NOOR" TOOTH BRUSHES (Regd.)

ALL GENUINE "KOH-I-NOOR" TOOTH BRUSHES

bear one of the following numbers:

On the 2/6 line, 101, 102, 103, 105, 107 and 108; on the 3/- line, 201, 202, 203, 205, 207 and 208; and on the Child's size 50 and 51.



THE BRITISH DRUG HOUSES

'DUOGEN'

A new and distinctive quality of Liq. Hydrogen. Peroxid. (10 vols.) Made in the B.D.H. laboratories and guaranteed to be chemically

pure and therefore entirely free from irritating properties.

'Duogen' is exceptionally stable and may be depended upon always to retain its activity.

The public, the dentist, and the medical practitioner alike are waiting to welcome this perfected product and will thank the pharmacist for introducing it to them.



Full direct ons for use are on the label.

PRICES

		WHOLESALE
SIZE	RETAIL	PER DOZ. NET
4 fl. oz.	 1/4	9/-
8 fl. oz.	 2/3	16/-
16 fl 07	4/-	30/-

'Duogen' is being placed on the P.A.T.A., and it will be noted that the margin of profit allowed is an ample one.

22-30, Graham Street, City Road, LONDON, N.I.



